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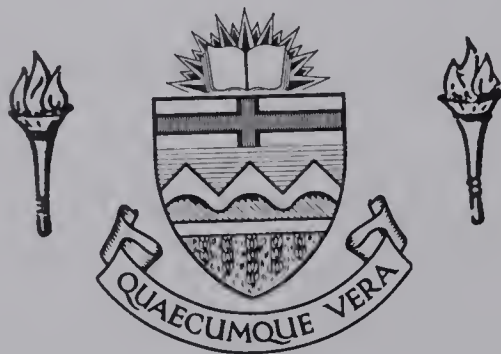
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PERCEPTION OF PARENTS AS  
RELATED TO LEVELS OF PERCEPTUAL  
DIFFERENTIATION

by



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A THESIS

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The undersigned certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "Perception of Parents as Related to Levels of Perceptual Differentiation," submitted by Leonard Robert Denton in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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## ABSTRACT

The perceptions one has of his parents' behavior toward him when growing up as related to one's capacity to function in a perceptually differentiated manner served as the focus of the present study. Using both the mother and father forms of a parent-child relationship questionnaire (PCR) developed by Roe and Siegelman (1963), perceptions of subjects' parents were collected from both girls and boys attending high school and college in a southeastern Alberta City. Perceptual differentiation measures were obtained from the same subjects, using a miniature rod-and-frame test, a changing figure test, a closure speed test, and a closure flexibility test. Respectively these tests were operationally defined as measures of field independence, flexibility in changing a set, structuring an uncompleted stimulus pattern, and of analytical functioning in perception.

The hypothesis guiding the study was that scores on the PCR scales which showed positive loadings on the Love-Reject and Casual-Demand Factors reported for these scales would be positively related to perceptual differentiation measures. Also included in the hypothesis was the prediction that PCR scales showing negative loadings on the same factors, as well as positive loadings on an O-Factor reported by Roe and Siegelman, would be negatively related to the differentiation measures. Pearsonian "r"s were used in testing the hypothesis. Groups selected as being in the top one-third and bottom one-third of the distributions on each dif-



ferentiation measure were also compared on mean PCR scale scores, using Fisher's  $t$  in determining significance levels.

All groups were found to support the hypothesis in respect to several or at least one of the differentiation measures on the O-Factor scales. This factor is defined by the PCR authors as indicative of overt concern by parents of a somewhat overprotective or indulgent quality. There were some discrepancies in scale loadings on this factor in comparison to those reported by the PCR authors. This was particularly the case with the college boys group, where the factor was more relevantly defined as indicative of a supportive-type of parent-child relationship, and difficult to distinguish from the Love-Reject Factor. For college boys the factor was interpreted as really supporting the hypothesis in respects to the Love-Reject Factor scales.

The high school and college boys groups supported the hypothesis on the Love-Reject scales for one or several of the differentiation measures. This was clearly the case for the college boys. On some of the perceptual measures the high school boys tended to yield opposite to predicted relationships between PCR scales loading on the LR Factor and differentiation measures. This tendency was also noted in the high school girls' group, although this group also tended to support the hypothesis. The college girls group, however, were found to clearly yield reverse to hypothesized relationships on the LR Factor scales, for several of the measures of perceptual differentiation.





In respect to the PCR scales loading on the Casual-Demand Factor, only the high school boys yielded statistically significant relationships between their perceptions of parents and a differentiation measure. The punishment scales loading negatively on the CD Factor supported the hypothesized direction on the analytical task. However, reverse to hypothesized directions in relationships were found to attain on the field independent and changing set measures in the high school boys. Similar tendencies for some of the differentiation measures were noted in the other groups. There was one exception. Tendencies to support the hypothesis were noted in the college girls group.

Findings in respect to sex differences in perceptions of parents are reported in a partial attempt to explain the contrasting picture for the college boys and girls on the Love-Reject Factor scales. Findings are also reported of correlations between PCR scales and Shostrom's Personal Orientation Inventory scales, as well as between PCR scales and a cognitive measure. (Watson-Glaser Critical Thinking Appraisal.) Similarly, data is reported on findings in respects to correlations between the differentiation measures and scores obtained from the personality inventory and cognitive measure. These latter data are however, reported for only the high school groups and no attempt is made in this study to integrate the findings with the main focus of the investigation.





Several suggestions are made in regards to the necessity of studying specific components of parent-child interaction as related to specific aspects of more basic perceptual functioning. Also, a number of questions for further research are raised. These pertain to the question of sex differences in perceived behavior of parents as related to perceptual functioning. Suggestions for further research are also made respecting the relationships of perception of parents to cognitive and personality functioning. Relationships between more basic perceptual functioning and these same variables are also suggested as fruitful areas of research.



## ACKNOWLEDGEMENTS

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Last but by no means least, a special thank you is in order to Mrs. Phyllis Bayer for her most helpful secretarial proficiency and dedication to the task of typing manuscript and the somewhat detailed tables found in this report.

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# TABLE OF CONTENTS

CHAPTER		PAGE
I	INTRODUCTION . . . . .	1
	Statement of the Problem . . . . .	11
II	LITERATURE REVIEW AND RATIONALE . . . . .	13
III	METHODS AND PROCEDURES . . . . .	33
	Hypothesis	
	Description of PCR Categories . . . . .	34
	Statement of Hypothesis . . . . .	36
	Definition and Measurement of Variables	
	Predictor Variables (PCR). . . . .	37
	Criterion Variables. . . . .	40
	The Rod-and-Frame Situation . . . . .	42
	The Changing Ambiguous Figure . . . . .	48
	The Closure Flexibility Test . . . . .	54
	The Closure Speed Test . . . . .	57
	The Perceptual Differentiation Index . . . . .	60
	Socioeconomic Status . . . . .	60
	Subjects and Procedures	
	Subjects . . . . .	61
	Procedures	
	Data Collection of Predictor Vari- able Measures . . . . .	61
	Data Collection of Criterion Vari- able Measures . . . . .	64
	Rod-and-Frame . . . . .	64
	Changing Ambiguous Figure . . . . .	65
	Closure Flexibility and Clos- ure Speed . . . . .	67
	Statistical Analyses and Procedures	
	The Perceptual Differentiation Index. . . . .	67
	Hypothesis Testing (Analysis, Part A; Analysis, Part B). . . . .	68
	Factor Analysis of PCR . . . . .	70
IV	RESULTS AND DISCUSSION . . . . .	72
	High School Groups	
	Results: Analysis, Part A	
	High School Boys. . . . .	73
	High School Girls . . . . .	76
	Results: Analysis, Part B	
	High School Boys . . . . .	80
	High School Girls . . . . .	84
	College Groups	
	Results: Analysis, Part A	
	College Boys . . . . .	86
	College Girls. . . . .	88
	Results: Analysis, Part B	
	College Boys . . . . .	91
	College Girls . . . . .	94



	Additional Analyses of Sex Differences in Regard to Reversal of Hypothesized Directions of Relationships . . . . .	97
V	SUMMARY OF FINDINGS, DISCUSSION AND CONCLUSIONS . . . . .	102
	General Approach to Summary of Findings . . . . .	102
	Summary of PCR-Factors as Related to Perceptual Differentiation Measures . . . . .	108
	Love-Reject Factor	
	High School Boys . . . . .	108
	High School Girls . . . . .	108
	College Boys . . . . .	111
	College Girls . . . . .	111
	Casual-Demand Factor	
	High School Boys . . . . .	111
	High School Girls . . . . .	114
	College Boys . . . . .	114
	College Girls . . . . .	115
	Overt-Concern Factor	
	High School Boys . . . . .	115
	High School Girls . . . . .	116
	College Boys . . . . .	116
	College Girls . . . . .	116
	General Summary of Findings For All Groups as Related to Hypothesis	
	The L-R Factor . . . . .	117
	The C-D Factor . . . . .	118
	The O Factor . . . . .	119
	Socioeconomic Status . . . . .	121
	Discussion . . . . .	124
	Conclusions . . . . .	137
	BIBLIOGRAPHY . . . . .	144
	APPENDICES . . . . .	155
APPENDIX A <sup>1</sup>	Face Sheet PCR-Mother . . . . .	156
A <sup>2</sup>	Face Sheet PCR-Father . . . . .	157
A <sup>3</sup>	Ambiguous Figure Series . . . . .	158
A <sup>4</sup>	Face Sheet of Closure Flexibility Test . . . . .	159
A <sup>5</sup>	Face Sheet of Closure Speed Test . . . . .	160
A <sup>6</sup>	Bases of Socioeconomic Status Ratings . . . . .	161
APPENDIX B	Results of Factor Analyses of PCR	
	Mother Form . . . . .	163
	Father Form . . . . .	164
APPENDIX C	Sex Differences on PCR	
	Boys vs. Girls . . . . .	165
	Father vs. Mother . . . . .	166
APPENDIX D	PCR Scales Correlated with POI Scales . . . . .	
	High School Boys . . . . .	167
	High School Girls . . . . .	168
	Perceptual Differentiation Measures and Watson-Glaser Correlations with POI Scales and Watson-Glaser Correlations with PCR Scales . . . . .	169





# LIST OF TABLES

TABLE		PAGE
I	Description of PCR Categories (Roe & Siegelman, 1963) . . . . .	34
II	Intercorrelations Among PCR Scores, SES, and Perceptual Differentiation Measures For High School Groups . . . . .	74
III	Differences Between Means on PCR Scales of Subjects of High Vs. Low Levels of Perceptual Differentiation in a Group of High School Boys. . . . .	81
IV	Differences Between Means on PCR Scales of Subjects at High and Low Levels of Perceptual Differentiation in a Group of High School Girls . . . . .	85
V	Intercorrelations Among PCR Scores, SES and Perceptual Differentiation Measures For College Groups . . . . .	87
VI	Differences Between Means on PCR Scales of Subjects at High and Low Levels of Perceptual Differentiation in a Group of College Boys . . . . .	92
VII	Differences Between Means on PCR Scales of Subjects at High and Low Levels of Perceptual Differentiation in a Group of College Girls. . . . .	95
VIII	Relationships Obtained in Predicted Directions and Reverse to Predicted Directions Between PCR Categories and Individual Perceptual Differentiation Measures . . . . .	98
IX	Similarities and Differences Between Predicted and Reverse to Predicted Relationships in Different Sex and Grade Levels . . . . .	100
X	Summary of the Direction of Differences in Perceptions of Parents by High School Boys and Girls who performed at High Levels on the Perceptual Tasks . . . . .	105
XI	Summary of the Direction of Differences in Perceptions of Parents by College Boys and Girls who performed at High Levels on the Perceptual Tasks. . . . .	106
XII	Summary of PCR Factors and Performance on Perceptual Differentiation Measures in a Group of High School Boys . . . . .	109
XIII	Summary of PCR Factors and Performance on Perceptual Differentiation Measures in a Group of High School Girls . . . . .	110
XIV	Summary of PCR Factors and Performance on Perceptual Differentiation Measures in a Group of College Boys . . . . .	112





XV	Summary of PCR Factors and Performance on Perceptual Differentiation Measures in a Group of College Girls . . . . .	113
XVI	A Summary Table Indicating Support and Reversals of Predictions in The Hypothesis For The High School and College Groups . . . . .	122
APPENDIX B		
I	Rotated Factor Loadings, Communalities and Percentage of Variance For Each Group in Present Study for PCR-Mother . . . . .	163
II	Rotated Factor Loadings, Communalities and Percentage of Variance For Each Group in Present Study for PCR-Father . . . . .	164
APPENDIX C		
I	Comparison of Means on PCR Scales of High School and College Boys Vs. Girls Groups when not Equated, and when Matched on the Differentiation Index . . . . .	165
II	Comparison of PCR Category Means in Perceptions of Mother Vs. Father by High School and College Groups.	166
APPENDIX D		
I	Correlation of PCR Scales Against Personal Orientation Inventory Scales in a High School Boys Group..	167
II	Correlation of PCR Scales Against Personal Orientation Inventory Scales in a High School Girls Group..	168
III	Correlations of Perceptual Differentiation Measures and a Cognitive Measure Against Personal Orientation Inventory and PCR Scales . . . . .	169



## LIST OF FIGURES

FIGURES		PAGE
1	Rod and Frame Apparatus, Model PR-20 (Shaw Lab. In.) . . . . .	45
2	Subject Seated at Lab. Station used in Test- ing with Rod and Frame Apparatus, Model PR20.	45
3	Appendix A <sup>3</sup> - Fig. 1 Changing Ambiguous Figure Series . . . . .	158



# CHAPTER I

## INTRODUCTION

Historically the family has been attributed far-reaching significance by personality and social theorists in attempts to understand and explain individual behavior of the human. Family research has been undertaken at various levels in linking family variables and child behavior variables. (Hoffman and Lippitt, 1960). Foote and Cottrell (1955) note that in recent years an upward trend is found in family research. This trend seemingly reflects the increased concern and awareness of the significant relationships between family variables and personality expression and their subsequent impact on the development of human resources. Handel (1965) in making reference to family research, feels that the evidence strongly suggests that the process of personality formation and the process of family integration are, to an important extent, the same phenomena. The significance of the family in the personality expression of its members has also caught the renewed interest and applied attention of those in clinical settings, wherein the total family unit as opposed to the disturbed member only, become the focus of treatment in the event of personality disturbance. (Ackerman, 1958; Howells, 1960; Epstein, 1962; Cleveland, 1964; Jackson, 1961; Denton, 1965; Bell, 1961). Bell, (P. 4) perhaps most succinctly states the rationale in this respect:

(The) emphasis on the family means that the





problem for which the family comes to treatment, usually a difficulty with one of the children, must be accepted not as the symptom of an individual's disturbance but as a symptom of disrupted relationships in the family....Functionally, then, the symptom is thought of as the product of a disruption in family interaction, most usually a breakdown in intrafamily communication, and not as the product of intrapsychic conflicts. From this point of view conflicts within the individual become the end results rather than the cause of disturbance.

Past and present approaches to family research vary from taxonomic and descriptive interest in the family to a diagnostic approach to the understanding of family pathology and health. Hoffman and Lippitt (1960) outline the various levels of research on family life variables, in what they call a causal-sequence schema, moving from the most general and causally distant family variables, such as parental background (national origin, educational history) to those more specific and causally closer to the child's personality and behavior. At this latter end of their schema, the authors place the variable which they term "the child's orientation toward parents and siblings". Within this category the focus is on the child's perceptions of the family and its members and his evaluative reactions of these. This level in the causal sequence is seen by the authors as a kind of bridge between the family as a stimulus situation for the child and the child as a product of the family. Hoffman and Lippitt also indicate the value of the child's perceptions and reports of his family as an independent variable in family research. Moreover, they offer evidence to indicate that such percep-





tions might be more valid predictors of behavior than reports by external observers or by parents themselves of their interactive behavior with their offspring. Schaefer (1965) offers considerable support to this position in his brief review of the literature of family-perception research. It might also be noted in this context, that some years ago Lewin (1935) stated, "history as the child has experienced it, is also a psychologically essential constituent of the things of the environment."

In view of the importance attributed to the offspring's perception of his family members or parents, and also of the importance attributed to one's perceptual behavior in general to personality expression, one might expect to discover studies which attempted to investigate the potential relationship between these two variables. This area, however, appears to have received minimal attention, possibly due to the recency in seriously attributing importance to the child's perceptions of his family as a respectable independent variable worthy of study in more basic research on perceptual behavior. However, as suggested by the findings reported in the work of Dyk and Witkin (1965), the relationship of the child's perceptions of his parents to his actual perceptual behavior, would appear to be a valuable area of study. Those attempts already made in the study of parent-child interaction by direct interview and observations by external observers, and its relation to cognitive style of the child (Hess, 1965), (Bieri, 1960), (Bing, 1963), and perceptual style of the child



(Witkin, 1959), (Dyk and Witkin, 1965) offer supporting evidence of a significant relationship between parent-child interaction and the cognitive and perceptual behavior of the child. If the child's perceptions of his parents and of their mode of their interaction with him are more valid predictors of his behavior and adjustment than reports by parents or of external observers, (Ausubel et al., 1964; Hoffman & Lippitt, 1960; Schaefer, 1965), it would seem plausible to expect that such perceptions would be also related to the child's more basic perceptual behavior. Dyk and Witkin (1965) offer partial evidence for such a relationship.

The study of the child's perception of his parents as a variable related to his more basic perceptual behavior would appear to be a fruitful research area. This would seem to be the case in any initial attempts to isolate crucial developmental forces which influence such perceptual behavior and its related outcomes in the expression of personality. In such a study, it would first seem relevant to make some observations of the attention given in recent years to the importance of perceptual behavior as a crucial variable in personality expression.

The weight attributed to one's perceptual behavior as a significant determinant of one's behavior in general, and of one's interpersonal behavior in particular is expounded by numerous personality theorists. Murphy (1947) makes the following observation:

"If we understand the differences in perceiving,





we shall go far in understanding the differences in the resulting behavior."

Coleman (1960), notes that Combs and Syngg in the initial publication of their book Individual Behavior, in 1949, excited the psychological world with their thesis that behavior can be understood only in terms of the individual's personal frame of reference. Coleman notes that subsequent research by many investigators has lent support to this perceptual view of behavior. Blake and Ramsey's, (1951) and Beardslee & Wertheimer's, (1958) collections of papers by well-known theorists and researchers in the psychological field provide ample evidence of the importance attributed to perception as a personality variable. Blake and Ramsey, themselves, present the view that the study of perceptual activity provides a basic approach to an understanding of personality and interpersonal relations. Leeper and Madison (1959) nevertheless observe that experimental psychologists concerned with research on perceptual phenomena have shown little interest in trying to relate their concepts to problems of personality. These latter writers, moreover, in subscribing to a somewhat broad view of perceptual phenomena as the total gamut of representational processes within the organism, postulate that principles of perception that appear in matters of simple sensory organization (this being isolated as one of the main foci in experimental research with perception) apply to very significant phenomena of personality. In their attempt to relate the perceptual behavior in real life situations, Leeper and Madison propose that person-





ality is a matter of how we perceive life situations, or more directly a matter of perceptual processes and habits.

Although Leeper and Madison discuss five basic or fundamental perceptual principles (derived from research on sensory organization) involved in personality, an aspect of perceptual behavior that stands out as of particular significance in personality functioning is that of the capacity to shift one's initial perceptual organization once this has been established in reference to a stimulus or stimulus situation. This aspect of perception is not only attributed considerable importance by Leeper and Madison but by other personality theorists as well. (Witkin, 1958; Frenkel-Brunswick, 1949; Klein, 1951). This shifting capacity may be termed perceptual flexibility, or one aspect of developed perceptual differentiation, the latter term used by Witkin in referring to such articulated behavior. (Witkin, 1964, 1965), (Dyk & Witkin, 1965). (Frenkel-Brunswick describes similar behavior in terms of "tolerance for ambiguity.") The similarity of this construct to what Klein terms "sharpening" and Witkin calls "field-independency" is also noted. Individual variation in such perceptual behavior when dealing with ambiguous stimulus situations, is suggested by Leeper and Madison to be related to personality adjustment. For example, they suggest that persons with personality problems fail to recognize the Vieldeutig character of real life situations (having a number of possibilities, like the ambiguous figure) and show limited capacity to produce or obtain alternate perceptual organizations. Frenkel-Brunswick (1949)



provides rather convincing support for such a formulation in drawing on observations from a number of sources, both clinical and experimental, which relate perceptual flexibility ("tolerance for ambiguity" and "non-rigidity", in Frenkel-Brunswick's terminology) to tolerant social attitudes, absence of specific clinical symptomatology, and non-authoritarian personality characteristics. Bruner (1957) notes that individuals vary in regards to the range of alternatives with which they can deal with stimulus situations. He observes that should the environment contain unexpected events, or unusual sequences, then the result with some people will be a marked slowing down in identification and categorizing. He speaks of such people as "rigid" or "stuck." Bruner's observations are similar to those of Klein (1951) whose findings suggest that people who are not able to shift categorization, under gradually changing conditions of stimulation, tend also to show "overcontrol" on other cognitive and motivational tasks. Klein, however, went somewhat further than this, and found that his "overcontrol" or "lag-group" or "levelers", as he refers to such subjects, were clinically differentiated from the "non-lag groups" or subjects that he designated as "sharpeners". Herein, Klein's findings offer further support to the relationship between perceptual behavior and personality correlates. Witkin (1958; 1965) reports similar findings of personality differences between subjects he terms field-dependent and field-independent on the basis of their performance on perceptual tasks. The





noteworthy observation in the work of both Klein and Witkin is that in their respective definitions of "non-lag" and "field-independent" subjects, they refer to such subjects as showing a greater capacity to shift perceptual organizations. In other words, such subjects are described as being more flexible, or as operating at a more developed level of perceptual differentiation than those designated as lagers or field-dependent.

Capacity for perceptual flexibility might also be related to another important aspect of interpersonal behavior, that of communication. For example, Combs and Syngg (1960) point to the importance of sharing perceptual fields as the bases of communication. These authors note that communication is essentially the process of acquiring greater understanding of another person's perceptual field. One can readily see the implication here for the person who has limited capacity for shifting his perceptual organizations (inflexibility). Such an individual might be expected to find himself in situations of communication breakdown or distortion. In view of the importance given to communication in interpersonal behavior (Hayakawa, 1962; Krech and Crutchfield, and Ballachey, 1962; H.S. Sullivan, 1953; Gibb, 1961; Bateson et al, 1956; Rogers, 1961; Newcomb, 1953; Jourard, 1964; Mowrer, 1964), such a person would be somewhat handicapped in his interpersonal relating and actual personality adjustment. The observation of the proponents of family therapy is noteworthy in this regard in that disturbed families are reported to show a breakdown in intrafamily communication (Bell,





1961). Such families also are observed to have low tolerance of differences within the family. The latter would seem related to the breakdown in communication. (Satir 1964). Such plausible relationships of perceptual flexibility and communicative behavior, however, must remain speculative without the benefit of research evidence. In view of the present stage of research in the area, one can only suggest the importance of the perceptual flexibility (or differentiation) variable to be related to personality expression and interpersonal behavior.

The primary interest of the author at this time, however, is not to further explore relationships of perceptual flexibility to manifested behavior. Rather than this, his interest is to raise the question of a possible dynamic and experiential correlate of such differentiated perception. In other words, the writer's focus is on perceptual differentiation as a criterion variable. The finding of relationships between the child's perception of his parents and this variable should suggest additional guidelines for future longitudinal research aimed at pinning down some of the crucial family determinants of the individual's basic perceptual behavior. Blake, Ramsey and Moran (1951, p. 208), in their discussion of perceptual processes as basic to an understanding of complex behavior, emphasize the importance of this question of determinants.

The important question now becomes: what are the determinants of perception? This question identifies a critical problem that must be answered in order to achieve new insights into the determinants of complex behavior.



The present approach to an understanding of individual personality, then entails a significant shift in emphasis. Rather than searching for personality factors or dimensions or applying psychodiagnostic labels or identifying the traits underlying individual differences in behavior, the effort shifts to the delineation and description of the determinants of individual differences in perceiving.

In searching for the source of basic differences in the perceptual differentiation dimension of perceptual behavior, one may ask: To what extent may constitutional characteristics contribute to the differences? To what extent are the differences determined by the life experiences of the child, both in the family and in society in the course of growing up? These questions are similar to those posed by Witkin (1958). As also is noted by Witkin, answers to such questions require a broad research program. Witkin and his co-workers considered the study of mother-child relationships as a particularly good starting point. Similarly the writer considers the study of parent-child relationships (including father-child as well as mother-child relationships) as a worthwhile genesis. Such a focus appears in line with that suggested by Blake, Ramsey and Moran (1951, p. 18).

If one were to try to identify for discussion one of the most important aspects of interactive activities from the standpoint of the significance of their lasting effects on the perceiver, it is likely that the interpersonal actions that go on between individuals and their consequence in reference to the development of the self system or stable conceptual sets would be among those selected for analysis.

To this statement might be added the observation of Bronfenbrenner who in reference to Lewin's field theory, dis-





cusses the role of experience as influencing perception.

Bronfenbrenner (1951, p. 213) comments thus:

In this connection, experiences with other people play a major role. Specifically, the way in which adults structure the life space for a growing child dictates the intrapsychic structure. For example, if the psychological field is constricted, this induces rigidity of systems in the person. Conversely, if the field is unstructured, the personality remains diffusely organized. From the developmental point of view, limitations of the child's own abilities call for a fairly complete structuring of his world by other persons, but as he grows older and becomes able to supply this structure for himself, increased freedom becomes essential if optimal differentiation is to occur.

#### The Problem:

The focal question one might raise in light of the above discussion is whether or not perceptually flexible subjects (those with more highly developed perceptual differentiation abilities) have had different experiences in their interaction with parents than more inflexible subjects (those with poorly developed differentiation abilities). Have less highly differentiated subjects had their perceptual development in this respect hampered by the nature of their family experiences with parents? Witkin's (1959) and Dyk and Witkin's (1965) studies suggest an affirmative answer to this question. The present study differs, however, from that of Witkin's and Dyk and Witkin's, in that older subjects of both sexes are used, both parents are included, and focus is on more specific aspects of parent-child behavior. Also the method of obtaining the predictor variable measures is not the same. The present author, in noting the importance attributed to the child's perception of his parents, has





relied on subjects' perceptions and recall of specific parent behaviors shown in interaction with the subject as he was growing up.

Since the present author focuses on discrete components of perceived parental behaviors, the problem may be more specifically stated thus: "Is there a relationship between the person's perceptions of parents' behavior as loving, casual, rewarding, rejecting, protecting, neglecting, demanding, and punitive and his degree of perceptual differentiation?" The basic hypothesis guiding the study is that there are such relationships, in that subjects who recall their parents as loving, casual, and rewarding when they were growing up will show a higher degree of perceptual differentiation than subjects who remember their parents as rejecting, demanding, neglecting, protecting, and punitive.

A more specific rationale for the investigation of the problem under study with reference to relevant observations from the literature is discussed in the following chapter.



## CHAPTER II

### LITERATURE REVIEW AND RATIONALE

In raising the question of antecedent variables of perceptual flexibility (differentiation), the work of Frenkel-Brunswick (1949) offers a focus. Frenkel-Brunswick discusses clinically observed attitudes and evaluations of parents by socially intolerant, prejudiced and "perceptually-inflexible" children. Basing her formulations on studies of such children, Frenkel-Brunswick (p. 117-118) states:

Synopsis of a variety of data suggests that the attempt to master aggression toward parental figures who are experienced as too threatening and powerful are among the important determinants of the tendency rigidly to avoid ambiguity of any sort. The requested submission and obedience to parental authority is only one of the many external, rigid, and superficial rules which such a child learns. Dominance - submission, cleanliness - dirtiness, badness - goodness, virtue - vice, masculinity - femininity are some of the other dichotomies customarily upheld in the homes of such children. The absoluteness of each of these differences is considered natural and external, excluding any possibility of individual's trespassing from the one side or the other. There is rigid adherence to these clearly delineated norms even if this implies restrictions and disadvantages for the own group. Thus, not only boys but also girls exhibiting the need for dichotomizing subscribe to restrictions for women rather than expose themselves to more flexible but at the same time more uncertain norms.

In line with this, in the type of home just referred to, discipline is experienced by the children significantly more often as threatening, traumatic, overwhelming, and unintelligible, as contrasted with an intelligent, non-ego-destructive type of discipline in the home with the more flexible atmosphere. Actually, in the home with rigid (referring to intolerance of ambiguity as discussed by the author) orientation, the discipline is more often based upon the expectation of a quick learning of external, rigid, superficial rules beyond the comprehension of the child. Family rela-





tionships are based on roles clearly defined in terms of dominance and submission. Some of the children live in a situation comparable to permanent physical danger which leaves no time for finer discriminations and for attempts to get a fuller understanding of the factors involved but in which quick action leading to tangible and concrete results is the only appropriate behavior. It is of course true that no child can fully master his environment. Global, diffuse, concrete, undifferentiated types of reaction, have thus been described by Werner (1940, 48) and others as characteristic of the child in general. It depends on the atmosphere of the home and the more specific expectations regarding the child's behavior, however, whether such reactions become fixated or whether progress toward higher developmental stages is being encouraged. For the latter course a reduction of fear and a tolerance toward weakness in the child are necessary.

Frenkel-Brunswick (p. 120) further suggests that the type of parent-child interaction as noted above, with its somewhat rigid control system, leads to reactions in the child characterized as "closed" Gestalten, which are not modified by new experience, which are immediately viewed from the standpoint of the old set and classified in the same way as the previous ones. She also notes that as an outcome such tendencies in the child as premature closure, jumping to generalizations on the basis of certain specific and external aspects, carrying over old sets, and the like, will become evident in the cognitive and perceptual reactions of the individual as they are evident in the emotional and social spheres.

Klein's (1951) findings, although not involving parent-child relationships, are relevant and worthy of mention. He reports finding variation in subjects in their capacity





to change an initial set when judging sizes of squares which gradually and progressively shifted in size. He termed one group of subjects a lag-group or levelers, and the other a non-lag group or sharpeners. These designations were made on the basis of subjects' respectively high or low capacity to adapt to the changing stimuli. Klein also found the groups to be different on other perceptual behavior, such as tolerance for the "unstable or equivocal". These perceptual differences were also found to be related to personality correlates. For example the lag-group subjects are described clinically as showing an avoidance pattern in everyday behavior of interpersonal relating, whereas the non-lag group shows a reverse pattern. These findings appear to support Frenkel-Brunswick in her observation of the relationship between perceptual behavior and personality manifestation.

Of more direct bearing, however, to Frenkel-Brunswick's observations, are the findings of Witkin (1964a). He reports a study of mother-child interaction as related to perceptual behavior categorized as field-dependency and field-independency. Witkin notes the similarity in different subjects' performances on a variety of perceptual tasks (rod and frame tests, tilted chair tests, dealing with embedded figure). He also notes that in each case the experimental situation requires the individual to separate some item - be it his own body, a rod, or a simple geometric figure from its background or context; to "break-up" and deal analytically with a given situation. Witkin refers to those subjects who show a capacity



to differentiate objects from background as "field-independent", and to those whose performance is determined by passive submission to the background as "field-dependent". (He also notes that the extent of field-dependency or field-independency is arranged in a continuum rather than constituting two different types.) Witkin reports (p. 189) that the field-independent subjects differ from the field-dependent, in that the former excel at problems that require the isolation of essential components from a context and the recombination of these components in new relationships. The field-dependent subjects, on the other hand manifest, to a greater extent, those perceptual characteristics described by Frenkel-Brunswick as being outcomes of the authoritarian family-control system. Of particular import are the observations by Witkin of personality differences between his field-dependent and field-independent groups. The latter are described as less dependent on others, and function socially with relative autonomy. Of particular relevance also is Witkin's finding of the relative stability of the perceptual styles he has studied, and the suggestion that a style of field-dependency or independency tends to be established early in life.

As a beginning step in an attempt to account for such style differences as noted above, Witkin and his co-workers focused on the study of mother-child relationships. He reports findings (Witkin, 1959, Dyk & Witkin, 1965) that classification of the mother as "growth-constricting" or "growth-fostering", turned out to be significantly related to the





children's perceptual performance. These observations offer considerable support to those of Frenkel-Brunswick (1949), and to the more general premise of a relationship between parent-child interaction and perceptual behavior of the child. This seems particularly the case, when one notes the criteria by which the mothers were classified, and the specific perceptual performance of the child. In this respect it is noted that boys with a field-dependent style of perceiving more commonly had mothers who were characterized as growth-constricting (restricts activities of the child; dominance and control are not in the direction of helping the child achieve increasing responsibility; physical care of the child seems inappropriate to his age; mother limits curiosity and stresses conformity.) On the other hand, Witkin reports (p. 191) field independent boys more often had mothers characterized as growth-fostering.

Although subjects in Witkin's study (1959) were male children, thus not permitting generalization to females, an interesting observation is made in reference to the developmental studies by Witkin and his co-workers (p. 189, 192). Using boys and girls of various ages between 8 and 20 years, and a battery of perceptual tests administered at intervals over a period of years, not only was a developmental trend of increasing field-independence noted as the child became older, and variations within age levels, but also a significant sex difference, with females as a group tending to be more field-dependent. Such findings provide for rather interesting speculation, particularly in view of greater control





that assumedly might be placed on the female child in the family, and the restrictions on her activity in order to adopt the socially accepted role of the female in our society. The question might be raised as to whether (if the prior assumption is plausible) this may be a significant experiential variable influencing the perceptual behavior of the female; or is the sex difference explained by some constitutional factor? The former answer to this question seems the more apt, and draws support from a finding in Droppleman and Schaefer's study (1963) that in a group of high school subjects, girls report receiving significantly more psychological control from mothers than do boys. Moreover, Dyk and Witkin (1965) in their report, also suggest that differences in parental emphasis for girls and boys might indeed be related to the sex differences in perceptual behavior.

The recently reported work of Hess and Shipman (1965) is also relevant to the influence of parent-child interaction on the perceptual and cognitive behavior of the child or offspring. Similarities may also be noted to Witkin's and Frenkel-Brunswick's observations. The former writers present the argument that the growth of cognitive processes is fostered in family control systems which offer and permit a wide range of alternatives of action and thought and that such growth is constricted by systems of control which offer predetermined solutions and few alternatives for consideration and choice. Hess and Shipman base their position on the work of Basil Bernstein (1961). Bernstein identifies two forms of



communication modes or styles of verbal behavior used by parents in interaction with the child. These are referred to as "restricted" and "elaborated" and are postulated to affect not only the communication modes and cognitive structure of the child, but also to establish potential patterns of his relation with the external world. Hess and Shipman note that the interlacing of social interaction and language is illustrated by the distinction between two types of family control, one oriented toward control by status appeal or ascribed role norms, and the other oriented toward persons. In reference to Bernstein (1964), Hess & Shipman state: (p. 871-873)

Families differ in the degree to which they utilize each of these types of regulatory appeal. In status (position) oriented families, behavior tends to be regulated in terms of role expectation. There is little opportunity for the unique characteristics of the child to influence the decision-making process or the interaction between parent and child.

....

In a person-oriented appeal system, the unique characteristics of the child modify status demands, and are taken into account in interaction. The decisions of this type of family are individualized and less frequently related to status or role descriptions. Behavior is justified in terms of feelings, preferences, personal and unique reactions, and subjective states. This philosophy not only permits but demands an elaborated linguistic code and a wide range of linguistic and behavioral alternatives in interpersonal interaction. ....

A person-oriented family allows the child to achieve the behavior rules (role requirements) by presenting them in a specific context for the child and by emphasizing the consequences of alternative actions. Status oriented families present the rules in an assigned manner, where compliance is the only rule-following possibility. In these situations the role of power in the interaction is more obvious, and, indeed, coercion and defiance are likely interactional possibilities. From another perspective, status-oriented families use a more rigid learning





and teaching model in which compliance, rather than rationale, is stressed.

Hess and Shipman (1965) hypothesized that the growth of cognitive processes is fostered in family control systems which offer and permit a wide range of alternatives of action and thought, and that such growth is constricted by systems of control which offer predetermined solutions and few alternatives for consideration and choice. Using social class as an independent variable, their research findings offer support to the hypothesized relationship between family control systems and cognitive processes or behavior of the child. Although they are not yet prepared to report findings in respect to the relationship of individual mother-child interactions and the cognitive development of the child, such relationships are suggested (p. 885.)

The studies noted in the previous pages would appear to offer supporting evidence for the proposition that a significant degree of the variance in perceptual behavior, of which perceptual flexibility or differentiation is postulated as a particularly important component, is a matter of past learning through parent-child interaction. Leeper and Madison (1959, p. 185) also indirectly suggest, when one takes into account the significance attributed to family experience and learning by personality theorists, the potential role of the nature of parent-child interaction in influencing the development of perceptual flexibility.

When one has the capacity for quick shifts of perceptual organization as with the old-woman-young-woman figure (here the authors refer to a



modified series of Boring's Ambiguous Female Figure to which they have made reference in discussing perceptual principles involved in personality), the chances are that this is possible only when the individual has previously gone through a long, slow development of perceptual shifts that offered him alternatives between which he could shift.

It would almost appear that some types of parent-child interaction might impair the perceptual development of the child, by possibly depriving him of perceptual experiences conducive to more adaptive personality functioning. Here we may note an implication from animal research, where it has been shown in a number of studies that perceptual experience acquired early in life has a profound influence on the intellectual (Thompson & Heron, 1954); perceptual (Nissen, Chow & Semmes, 1951); and emotional (Melzack, 1954); social (Melzack & Thompson, 1956); and affectional (Harlow, 1964) behaviors of the mature adult non-human mammalian. As respects the human element, the evidence would suggest that the child growing up in a family where parents are described as demanding, rejecting, over-protective, neglecting, and punitive might to a greater extent be deprived of perceptual experiences coincident with the development of perceptual differentiation. This, to a greater extent would appear to be the case than in the child growing up in a family where parents are described as more casual, loving, or symbolic-love rewarding. In the family where parents interact with the child with demanding and rejecting behavior, where regulations are likely to be strict and inflexible, where the child's thoughts and feelings are not considered important, and where he is





overprotected from his environment or punished for exploring it, one might expect that the child would be afforded little opportunity in the family to choose alternatives between which he could shift. Indeed, perceiving situations in alternative ways may be negatively reinforced. Consequently, one might expect the individual growing up in such a learning situation, which also offers the possibility of modelling his behavior after his parents (Bandura & Walters, 1963), to show a low degree of perceptual flexibility or differentiation. This might be expected to be the case in dealing with most situations and in particular the more threatening ambiguous or equivocal situations in which alternate perceptual organizations, or ways of perceiving are stimulated. On the other hand, the individual growing up in a family where parent behaviors are described as loving and casual, where thought is given to the child's point of view, where he is encouraged in independence, where there are few arbitrarily enforced rules, and where differing points of view are tolerated, would appear to be afforded much greater opportunity to choose alternatives between which he could shift. Indeed perceiving situations in alternate ways may be positively reinforced. Consequently, one would expect an individual in such a learning situation to develop a high degree of perceptual flexibility or differentiation in dealing with ambiguous stimulus situations as well as in dealing with most other life situations. The question of the possible relationship between these parental behaviors (loving, casual, rewarding, rejecting, demanding, protecting, neglecting





and punitive), as perceived by the child, and the degree of perceptual differentiation of the child is the problem with which this writer is directly concerned in the present study.

It is relevant at this point to discuss further the research evidence as respects the above categories of parent behavior and the rationale for using the child's perception of these parent behaviors as predictor variables. The selection of the above mentioned dimensions of parental behavior as having potential importance in the child's perceptual development receives guidance from several sources. The findings of Frenkel-Brunswick (1949), Witkin (1959), Dyk and Witkin (1965), and Hess and Shipman (1965), suggest their relevance in the development of perceptual behavior. These parent-child components also are found of importance in studies bearing on parental-behavior concepts. These latter mentioned findings are those reported by Schaefer (1958) and Siegelman (1965). Schaefer reports that factor analyses of psychological ratings of parental behavior reveal two orthogonal dimensions of love vs. hostility and autonomy vs. control (Schaefer, 1959). The same author (1965) notes that similar dimensions of authoritarian control and hostile rejection were found in factor analyses of parental-attitude scales (Schaefer, 1961a; Zukerman, Ribback, Monashkin & Norton, 1958) and that a review of conceptual models for parental behavior (Schaefer, 1961a) also revealed substantial agreement among two-dimension models that have been independently developed by Roe (1957), Slater (1962) and Schaefer (1959) from



different types of data. Siegelman (1965) makes the following observation in reference to attempts to develop a taxonomy or conceptual framework of parental behavior:

Although this classification may appear premature at this time, Schaefer (1961), Roe and Siegelman (1963) and Maccoby (1964) report strikingly similar dimensions of parental behavior presented by several investigators using diverse methodologies. Studies which describe parents' accounts of how they treat their children (Sears, Maccoby, & Levin 1957), parents' attitudes about child rearing practice (Cline, Richards & Needham, 1963; Nichols, 1963; Schaefer, 1959), direct observation of parent-child interactions (Baldwin, Kalhorn, & Breese, 1949), and adult retrospective memories of how their parents treated them when they were growing up (Roe & Siegelman, 1963) all suggest the parental-behavior factors of love-reject and casual-demand (i.e. autonomy-control).

The Love-Reject and Casual-Demand dimensions of parent behavior would appear to be most useful ones to study as linked to child behavior. There is also some evidence supporting a plausible relationship between these variables and perceptual behavior of the child and personality correlates thereof. (Dyk & Witkin, 1965). The basic question raised by the present writer, however, is whether the child's perceptions of parent behaviors toward him when growing up are similarly correlated with the perceptual behavior of the child. The observations of Frenkel-Brunswick (1949) suggest that this might indeed be the case. She notes, for example, that subjects showing intolerance for ambiguity (both on perceptual tasks and on social and emotional variables) describe, in their clinically obtained statements, their parents often in a stereotyped and exaggerated manner. She observes that these children often use cliches instead of expressing genuine feel-





ings, and give a narrow range of responses. She also notes that these perceptually rigid subjects make a preponderance of references to physical and other external characteristics rather than mention of what Frenkel-Brunswick refers to as the more essential and abstract aspects of parents' personalities. Herein at least is the suggested possibility that the family variable of the child's perceptions of parents might be a fruitful one to more systematically investigate as related to perceptual behavior. Adorno (1960) adds support to these observations when noting that subjects found to be high on authoritarianism as measured by the California F Scale reported little close personal relationship with their parents. Such subjects are reported to have considered their parents as very distant or even threatening forces, confided little in them, and received little support from them. When these observations are related to those of Cooper and Blair (1959) and Cooper (1960) the possibility of a relationship between perceived parent-child interaction and perceptual flexibility becomes even more plausible (although on shaky ground in view of possible differences in studies and necessitating a number of assumptions). The Cooper & Blair study reports findings that perceived parental behavior is related to one's social ideology as the latter is measured by Gough's E-F Scale (Gough - 1951). Subjects who evaluated parents highly on characteristics purported to measure parental behaviors considered congruent with child adjustment, are reported to perceive themselves similar in social ideology to



parents (Cooper & Blair - 1959) and also to score low on the E-F Scale used as a measure of social intolerance (Cooper, 1960). Further support for those findings is reported in a later paper (Cooper & Lewis, 1962). The relationship suggested by the present writer between perception of parents and perceptual behavior assumes that Adorno's and Frenkel-Brunswick's subjects would have shown low evaluation of parents on Cooper's Parent-Evaluation Scale, or vice-versa (that Cooper's subjects would also have shown low tolerance for ambiguity on Frenkel-Brunswick's perceptual tasks.) These things we do not know, thus the suggested relationship must remain speculative. Nevertheless, if we may assume that the perceptions the child has of his parents are the product of specific behaviors of the parent in interacting with the child, and that such perceptions are related to actual behavior and adjustment of the child (both reasonable assumptions), then it seems plausible to hypothesize a relationship between these perceptions and the actual perceptual behavior of the child. At this point, it is relevant to review the rationale and some of the empirical findings regarding the child's perception of parents as a useful family life variable related to the behavior of the individual.

The use of children's perceptions (child refers to offspring) of parental behavior as independent or predictor variables is supported both by assumptions in their use as stated by Ausubel (1954) and empirical findings from research studies. In the study of family life variables, the focus





on children's perception of their parents has yielded findings which suggest that such perceptions are perhaps more valid in predicting individual behavior than less introspective, and more objectively obtained, measures describing the actual family environment itself. (Hoffman & Lippitt, 1960; Schaefer, 1965; Ausubel et al, 1954). The latter writer observes that although parents' behavior is an objective event in the real world, it affects the child's ego development only to the extent and in the form in which he perceives it. Hence, notes Ausubel, perceived parent behavior is in reality a more direct relevant and proximate determinant of personality development than the actual stimulus content to which it refers. Support for such an assumption is offered by Leeper and Madison who postulate that a person lives in terms of his dynamically-organized perceptions rather than in terms of objective realities (1959, p. 182.)

In consequence of this factor of dynamic organization perceptual processes have a highly selective or abstractive character. It is as if the objective situation exists for the person virtually only as it is perceived by him - - as though for the moment the objective stimulation has no other qualities than those that are represented in his perceptual processes of that moment. - - What governs the rest of his activity, once a certain perceptual organization has been achieved, is the perceived situation.

One may note the similarity of this argument to that used by Bronfenbrenner when discussing Lewin's field theory in the context of stressing the importance of environment as a determinant of behavior. In noting that structural properties of the field are defined in large measure by social forces -





by the intervention, control, approval, and example of other persons, Bronfenbrenner states: (1951, p. 211)

Thus for the most part, the psychological field is determined by social rather than physical facts. In this connection it is important to recognize that for Lewin what is most relevant in the environment is not what is objectively there - the physical field - but what is perceived - the psychological field.

A second assumption stated by Ausubel in support of the use of children's perceptions of parental behaviors and attitudes is that it seems reasonable to suppose that these can be measured more validly than actual parental behaviors themselves. This supposition is made particularly in respect to issues where the greater emotional involvement of parents to represent themselves favorably may to a greater extent cause distortion in their (or even external observer's) reports. Hoffman & Lippitt (1960) and Serot and Teevan (1961) provide support for the plausibility of this assumption.

Ausubel also comments on the validity of such perceptual measures of parental behavior, as regards the extent to which verbal reports of perceptual content correspond to actual perceptual content - and notes that this can never be adequately determined. Correspondence to actual parental attitudes is considered an unsatisfactory validating criterion since the perceptual instrument does not purport to measure parent attitudes and behavior, but perceptions of these. It, however, is noted that the very same validating difficulties apply to observers' rating of parents' attitudes and behavior.

The plausibility of the assumptions made in reference



to children's perceptions of parental behavior would appear to be given further support by noting the usefulness of such measures in empirical research. Schaefer (1965) notes the appearance in recent years of numerous parent-perception instruments and of personality inventory sub-scales designed to assess attitudes towards parents. He also cites several studies which relate children's reports of parental behavior to other data on parent-child relationships (Andry, 1957; Bronson & Livson, 1959; Myers, 1935; Swanson, 1950), to inventory measures of child adjustment (Berdie & Layton, 1957; Brown, et al, 1947; Serot & Teevan, 1961; Stott, 1941), to observers' reports of child behavior (Bronfenbrenner, 1961; Brown, et al, 1947), to school achievement (Morrow & Wilson, 1961), and to other criteria of child adjustment (Anderson, 1941; Ausubel, et al, 1954; Cooper & Blair, 1959). Offspring's reports of parental behavior have also been found to differentiate normal subjects from psychiatric patients (Elias, 1952; Garnezy, et al, 1961; Greenfield, 1959; Hayward, 1955; Swanson, 1950; Williams, 1958). To these studies may be added more recent ones appearing in the literature (attempts to relate the child's perceived parental behaviors to vulnerability to cognitive disturbance by Heilbrun, et al, 1966; to anxiety and intraversion-extroversion by Siegelman, 1965; to delinquency by Medinnus, 1966; and to self-acceptance by Medinnus, 1965).

Guidance in formulating specific hypotheses in the present study has been derived from several of the findings re-





ported in the present chapter, and in particular from Dyk and Witkin's (1965) finding that young boys (10 and 14 year olds) whose parents were rated as supportive (guiding, helpful attitude and warm feelings toward child) on the bases of the subject's TAT stories, tended to show a higher level of differentiation than boys whose parents were rated as non-supportive (coercive, demanding, punitive and negative feelings toward child). However, the authors report finding a significant correlation between perception of mothers, but not fathers, and differentiation for ten-year olds. Also in validation studies, they report only significant correlations in ten-year old boys and TAT-rated perceptions of father, whereas for fourteen-year olds, there was found a significant relationship between perception of mother and perceptual differentiation. In the latter group the relationship with perception of father was non-significant. Although these findings suggest the operation of a developmental factor, Dyk and Witkin, however, conclude: (p. 43)

Taken together the results of the TAT studies suggest a tendency for more field-dependent children to see both mother and father as relatively non-supportive.

In spite of the question being unequivocally answered as to which parent might play the more significant role in the perceptions of the less and more highly differentiated boys, Dawson's findings (1963) with an older group from a quite different population is consistent with Dyk and Witkin's conclusions. Dawson, working with older male subjects from African tribes in Sierra Leone, found significant corre-



lations in the expected direction between measures of field dependence and degree of maternal strictness. This component of maternal behavior was evaluated through the subjects' perceptions of mothers. He also found decreased contact with father, severity in discipline with use of physical punishment, inconsistency in child-rearing, maternal dominance and decreased encouragement of assumption of responsibilities by children, to be characteristic of field-dependent subjects.

In the paper referring to the above studies, Dyk and Witkin also discuss sex differences in differentiation. They draw upon observations from their own work and that of others, to suggest that the picture may be rather complex in reference to relationships between same-sex and cross-sex parent-child interaction and perceptual differentiation. For example, they refer to Beiri's finding (1960) that women who identified with fathers, were more field-independent than women who identified with mothers. A number of other findings concerning sex differences makes it questionable as to what sex relationships can be plausibly hypothesized. Droppleman and Schaefer (1963) for example, found that boys see mothers as less psychologically controlling than girls. Seder (1957) reports that field-independent boys, but not girls, were more often punished by their fathers, whereas homes of field-dependent girls, but not boys, were characterized by less warmth and greater hostility. It would thus seem questionable to use common hypothesized relationships for both sexes or for both parents, in the present study. Actually,





since the field appears somewhat cloudy in these respects, it would seem a safer proposition not to formulate any hypotheses, but rather seek data to answer the primary question to see just what relationships might be found. On the other hand, the basic background theoretical position of the present study suggests certain relationships to hold regardless of sex of the subject or of the parent he is perceiving. It is felt that the field may be cleared somewhat by the formulation of specific hypothesized relationships between specific components of perceived parental behaviors for both mother and father, for both sexes - and perceptual differentiation variables.

In bringing under research focus the question of the child's perception of discrete components of parents' behavior as related to his degree of perceptual differentiation, the author will specifically define both the categories of parental behavior and the perceptual components involved. This will be done in the following chapter, in which is stated the hypothesis. Also in chapter three the variables involved in the hypothesis are defined and their measurement discussed. The methods and procedures employed in carrying out the investigation are also described.





## CHAPTER III

### METHODS AND PROCEDURES

#### I HYPOTHESIS:

The specific problem under study is whether or not there is a relationship between the person's perception of parental behaviors toward him when growing up, on one hand, and the person's degree of perceptual differentiation on the other hand. Several categories of perceived parental behavior have been mentioned in the preceding chapter as relevant to this question. It has been suggested that more "positive perception of parents" (i.e. as loving, casual, or generally supportive) would be associated with higher levels of perceptual differentiation, whereas more "negative perception of parents" (i.e. as rejecting, demanding, neglecting, protecting and punitive, or generally non-supportive) would be associated with a more poorly developed capacity for perceptual differentiation. The rationale for these suggested relationships has been discussed in chapters one and two.

Before stating the hypothesis, which involves specific perceived parental behaviors, it would seem of benefit to the reader to depart slightly from the usual sequence and first define these behaviors. This should provide a more meaningful understanding of the hypothesis and its empirical rationale, as related to the measuring instrument used to assess the perception of parent variable.

The ten parent-child interaction categories involved in the hypothesis to follow are those constructed and defined by



Roe and Siegelman (1963) in devising their Parent-Child Relations Questionnaire (PCR). The PCR was devised as a means of obtaining a measure of the characteristic behavior of parents toward their children, as experienced by the child. The ten components of parent-child interaction are presented in Table I as extracted from Roe and Siegelman (1963).

TABLE I

DESCRIPTION OF PCR CATEGORIES

Protective: This category includes parents who give the child's interests first priority. They are very indulgent, provide special privileges, are demonstratively affectionate, may be gushing. They select friends carefully, but will rarely let him visit other homes without them. They protect him from other children, from experiences in which he may suffer disappointment or discomfort, or injury. They are highly intrusive, and expect to know all about what he is thinking and experiencing. They reward dependency.

Demanding: Parents in this group set up high standards of accomplishment in particular areas, manners, school, etc. They impose strict regulations and demand unquestioning obedience to them, and they do not make exceptions. They expect the child to be busy at all times, at some useful activity. They have high punitiveness. They restrict friendships in accord with these standards. They do not try to find out what a child is thinking or feeling, they tell him what to think or feel.

Rejecting: Parents in this group follow the extremer patterns of the preceding group, but this becomes rejecting when their attitude is a rejection of the childishness of the child. They may also reject him as an individual. They are cold, and hostile, derogate him and make fun of him and his inadequacies, and problems. They may frequently leave him alone, and often will not permit other children in the house. They have no regard for the child's point of view. The regulations they establish are not for the sake of training the child, but for protecting the parent from his intrusions.

Neglecting: These parents pay little attention to the child, giving him a minimum of physical care, and no affection. They forget promises made to him, forget things for him. They are cold, but are not derogatory nor hostile. They leave him alone, but do not go out of their way to avoid him.

Casual: These parents pay more attention to the child, and are





mildly affectionate when they do. They will be responsive to him if they are not busy about something else. They do not think about him or plan for him very much, but take him as a part of the general situation. They don't worry much about him, and make little definite effort to train him. They are easy going, have few rules, and do not make much effort to enforce those they have.

Loving: These parents give the child warm and loving attention. They try to help him with projects that are important to him, but they are not intrusive. They are more likely to reason with the child than to punish him, but they will punish him. They give praise, but not indiscriminately. They try specifically to help him through problems in the way best for him. The child feels able to confide in them and to ask them for help. They invite his friends to the house and try to make things attractive for them. They encourage independence and are willing to let him take chances in order to grow towards it. Distinction between Loving and Casual categories can be difficult. A basic differentiating factor is the amount of thought given to the child's problem.

Symbolic-Love Reward: The parents using this kind of reward praised their children for approved behavior, gave them special attention and were affectionately demonstrative.

Direct-Object Reward: These included tangible rewards such as gifts of money or toys, special trips, or relief from chores.

Symbolic-Love Punishment: Such punishments included shaming the child before others, isolating him and withdrawing love.

Direct-Object Punishment: These included physical punishment, taking away playthings, reducing allowance, denying promised trips, and so on.

Roe and Siegelman (1963) report in their factor analytic studies that the above categories consistently show loadings for different samples on three factors, two of which are bi-polar. These latter are designated as "Love-Reject" and "Casual-Demand" factors. The third factor is labelled "Overt Attention" and appears to represent an overprotective component of parent-child interaction. Similarities of these factors to other studies reported in the literature are also noted by the PCR authors. (Baldwin, Kalhorn and Breese, 1945;



Roff, 1949; Schaefer, Bell and Bayley, 1959; Milton, 1958; Schutz, 1960; Schaefer, undated; Slater, undated.) In formulating the hypothesis in the present study, the rotated factor loadings of the specific categories on each of the factors, (as reported by Roe and Siegelman) served as guides in predicting the direction of relationships. For example, the PCR categories reported to load highly positive on the Love-Reject and Casual-Demand factors were predicted to show a positive relationship to capacity for perceptual differentiation. Those showing high negative loadings on the same factors as well as positive loadings on the Overt-attention Factor, were predicted to show a negative correlation with the perceptual behavior of concern in the study. The following is the specific hypothesis tested in the present study.

Statement of Hypothesis:

Subjects' perceptions of their parents' behavior toward them when growing up will show significant relationships and differences in their levels of perceptual differentiation in that:

(1) Subjects with higher as vs. lower levels of perceptual differentiation perceive their parents as more loving, more casual, and more symbolic-love rewarding.

(2) Subjects with higher vs. lower levels of perceptual differentiation perceive their parents as less protective, less demanding, less rejecting, less neglecting, less symbolic-love and direct-object punishing, and less direct-object rewarding.





## II DEFINITION AND MEASUREMENT OF VARIABLES:

### 1. Predictor Variables:

Perceptions of the parental behaviors referred to in the hypothesis above are operationally defined in terms of the separate category-scale scores derived from subjects' responses on the Parent-Child Relations Questionnaire (PCR) developed by Roe and Siegelman (1963). The PCR categories have been defined above in Table I. (See Appendix A<sup>1</sup> and A<sup>2</sup> for face sheet of PCR forms.)

In choosing the PCR, the present author has observed the comments of Schaefer (1965), who notes that the repeated development of ad hoc measures of the child's perceptions of parental behaviors, frequently without the constructive use of earlier studies, has delayed the process of conceptual refinement in this area. He also observes that many of the methods have not attempted to measure discrete components of parental behavior, have not differentiated maternal from paternal behavior, and have not distinguished parental adjustment and marital adjustment from parent-child interaction. The Parent-Child Relations Questionnaire (PCR) attempts to overcome these pitfalls, and provides a measure of the specific components of parental behavior of interest in the present study. Moreover, the PCR instrument has received the benefits of considerable research in its construction. Factor analytic studies consistently indicate bipolarization on the factors of Love-Reject and Casual-Demand, and the presence of a third factor of Overt-Attention. These factors, as noted by





Roe and Siegelman (1963), Schaefer (1965) and Siegelman (1965) also emerge from other studies and scales assessing parental behaviors in reference to the child.

As noted by its authors, (Roe & Siegelman, 1963) the 130 item PCR was devised to obtain a measure of the characteristic behavior of parents toward their young children, as experienced by the child. The authors point out that the items refer to specific behaviors, not to attitudes, in order to reduce some of the difficulties deriving from the use of retrospective data. The scale is composed of ten subtests, six of fifteen items each for behavior characterized as Loving, Protecting, Demanding, Rejecting, Neglecting and Casual; and four of ten items each for categories referred to as Symbolic-Love Reward, Direct-Object Reward, Symbolic-Love Punishment and Direct-Object Punishment. Separate questionnaires are provided for Father and Mother. Factor scores may be used, (based on coefficients computed for the group on which the instrument is used), instead of scores on the separate subtests. However, some information is lost in the process and when a more differentiated description is desired, as in the present study, scores on the scales may be used separately. In the present study all subtest scores are used as separate predictors. Reported reliabilities\* for the various subtests range (with the exception of that of Symbolic-Love Punishment (.69) on the Father scale, and Symbolic-Love Reward (.71) on the Mother scale), from .75 to .90. The authors point out that the PCR has been used in studies of late adolescents and of adults who have filled it

\*Tryon.  $R = \frac{1}{n} \left( 1 - \frac{\sum Si^2}{Sx^2} \right)$  where  $Si^2$ =sum of variances of each item, and  $Sx^2$ =total variance.



out with reference to their own childhood, and that a form with slightly modified wording is now in use with children.

Although the PCR is receiving considerable use (personal communication from one of its authors,) reports are just beginning to appear in the literature. Roe and Siegelman (1964) report the use of the instrument in the study of interest development. More recently reported studies are those of Medinns (1965) who reports relationships between PCR scores and the adolescent's self-acceptance; Baer and Ragosta (1966) who report a study of an attempt to relate PCR scores to mathematical and verbal ability; and Siegelman (1965) who reports a study in which PCR factors of Love-Reject and Casual-Demand are studied in relation to personality correlates of anxiety and extroversion - introversion. Siegelman's report is of additional interest in that he provides information regarding the PCR and response-set tendency, in his making reference to a study in which no significant associations were found between the Marlowe - Crowne Social Desirability Scale (Crowne & Marlowe, 1960) and PCR responses for mother and father. He also reports that of 40 correlations derived from pupil reactions to the Couch and Keniston Agreeing Response Scale (Couch & Keniston, 1960) and the PCR, only one correlation was found to be significant at the .05 level.

The above considerations, the availability of statistical data bearing on the scale construction, indications of its apparent usefulness, as well as its face validity for purposes intended by the present writer, were mainly instrumental





in the selection of the PCR for use in the present study.

## 2. Criterion Variables:

A high level of perceptual differentiation is defined as a subject's capacity to function at a high level in dealing with each of several perceptual tasks described below, which are empirically related to such ability. These tasks include a) the capacity to overcome conflicting cues in a stimulus field in arriving at an accurate perceptual judgment (field independence); b) the capacity to overcome the effect of an initial set in reorganizing an ambiguous stimulus field (flexibility); c) the capacity to see a given configuration (geometric figure) which is hidden or embedded in larger more complex figures (closure flexibility) and d) the capacity to construct a whole picture from incomplete or limited material (structuring and closure speed).

The above characteristics of a high level of perceptual differentiation are in line with Witkin's observations that such articulation of experience is indicative of developed differentiation (Dyk and Witkin, 1965, p. 22).

Early in development, perceptual organization is likely to depend primarily on structural arrangements within the stimulus field. With fields that are structured, perception of a part of the field is apt to be strongly dominated by the over-all organization of the field; fields that lack inherent structure are likely to be perceived as relatively unorganized. Through his commerce with the environment, the child learns about the special significance of stimulus objects; this contributes to the discreteness of parts of the field and provides the basis for organizations of the field in addition to that indicated by structural properties. We consider perception to be articulated, as contrasted to global, if the person is able to perceive items



as discrete from background when the field is structured (analysis), and to impose structure on a field, and so perceive it as organized, when the field has relatively little inherent structure (structuring). The concept of articulation may be applied to experience of an immediately present stimulus configuration (perception) and to experience in the realm of symbolic material (thinking). Articulated experience is indicative of developed differentiation.

Throughout this study the present author has used the terms perceptual differentiation and perceptual flexibility interchangeably. He feels justified in so doing in view of his observation that the manifestation of a high level of differentiation on the above tasks entails flexibility at the perceptual level, on the part of the subject, to overcome stimulus determined sets. More specific tests of the relationship of such flexibility in the "Einstellung" situation and measures of field dependence also show the two to be related (Witkin, 1964, p. 178). Indeed, one of Witkin's measures of field-independence-dependence, much used as a test of differentiation, - the Rod-and-Frame Test (Witkin, 1949, 1958, 1964a, 1965) - may be viewed as an instrument to measure perceptual flexibility. Such flexibility in the rod-and-frame situation would be in terms of one's capacity to overcome the initial set of the tilted frame in reorganizing the stimulus field, when given the task of adjusting the rod to an upright position. Confusion, however, may be avoided for the reader if the author henceforward considers flexibility as primarily an important aspect of perceptual differentiation, the latter as defined in the preceding pages.

An operational definition of perceptual differentiation





in the present study is given in terms of separate and composite measures obtained from the use of a) an adaptation of Witkin's rod-and-frame situation; b) a changing two-possibility ambiguous figure in which the subject is given the task of overcoming the initial set provided by presentation of the figure in the least ambiguous form. (The subsequent presentations of the figure transitionally introduce changes which gradually favor the second organization); c) a closure flexibility (concealed figures) test, in which the task is to find given geometric figures which are embedded in more complex figures; d) a closure speed test in which the task is to perceive an apparently disorganized or unrelated group of parts as a meaningful whole. These instruments, and their use in the study are described below.

(a) The Rod-and-Frame Situation:

Witkin's use of the rod-and-frame situation to obtain measures of field-dependence (what he would term limited analytical differentiation) is described in several easily accessible sources (Witkin, 1949, 1964a; Beardslee and Wertheimer, 1958, p. 516-517; Dyk and Witkin, 1965). One notes that Witkin has used three series of testing procedure with the rod-and-frame test, the first two which involved tilting both the subject's body and the frame, and the third where the body is erect and the frame is tilted  $28^{\circ}$  to the left or right. Intercorrelations under the varied conditions, (.70) are considered sufficient to justify the use of only the third series in obtaining the measure of field-dependence in the present study. Basically the method employed is to have the subject seated in





complete darkness facing a luminous rod in a luminous frame. The rod and frame can be moved independently of each other. The subject sees them first in a tilted position, then while the frame remains tilted, the subject is asked to move the rod (or instruct experimenter to do so) until it appears upright. Witkin notes that if the subject reports the rod is straight when objectively it is tipped toward the tilt of the frame, he is relying primarily on the visual field. If on the other hand, he adjusts it close to the true upright, he is relying mainly on bodily position, and is relatively independent of the visual field. The degree of tilt of the rod, as adjusted by the subject, gives a measure of his way of perceiving. Test-retest reliabilities for the rod-and-frame situation, after more than a year's span between testings, are reported to be .88 for males and .87 for females. (Beardslee and Wertheimer, 1958, p. 524). As stated by Witkin in the above reference:

These values are very high, especially for the type of test used, and indicate marked stability in the individual's perception, as far as orientation toward the upright is concerned.

Similar evidence of stability of perceptual orientation as measured by this method is provided by Witkin in a later paper (1964a).

The Rod-and-Frame Apparatus, model PR-20, (Shaw Laboratories, Inc.) was used in obtaining field-independence measures as indicative of levels of differentiation in the present study (see Fig. 1, p. 45). This apparatus contains two plastic discs, a line and a square pattern, which are rotated



independently by external means. The subject can control the position of the line (rod), and the experimenter can control either the line or the square (Frame). A calibrated scale which reflects plus or minus 20 degrees from the vertical is readily accessible to the experimenter to indicate the deviation of either figure from the vertical. A circular bubble level and a three point leveling system are provided to permit adjustment to a true reference position regardless of the surface upon which it is placed. Ultra-violet lamps, of a type harmless to the human eyes, are located inside the unit, with a switch control located on the experimenter's side of the device. Light from these lamps excite a special sensitized paint used for the rod and frame, causing them to be visible in the dark. Overall size of the unit is 15" x 15" x 6". Electrical power required is 115V. 60 cps 2a. (Shaw Laboratories, Inc; 1966).

In using the apparatus described above, the author first constructed a testing station (see Fig. 2, p. 45). This was done for the purpose of reducing, insofar as possible, any cues that might be provided the subject by light reflecting from the apparatus. The station consisted of a large box arrangement (Length - 34", Height - 17", and depth, front to back - 27") located on a large table (6.2' x 2.6') of normal sitting height (30.5"). The box which housed the apparatus was lined with soft faced black bristol board, and open at the back where the experimenter was seated, to permit access to the controls. On the side, facing the subject, was a circular





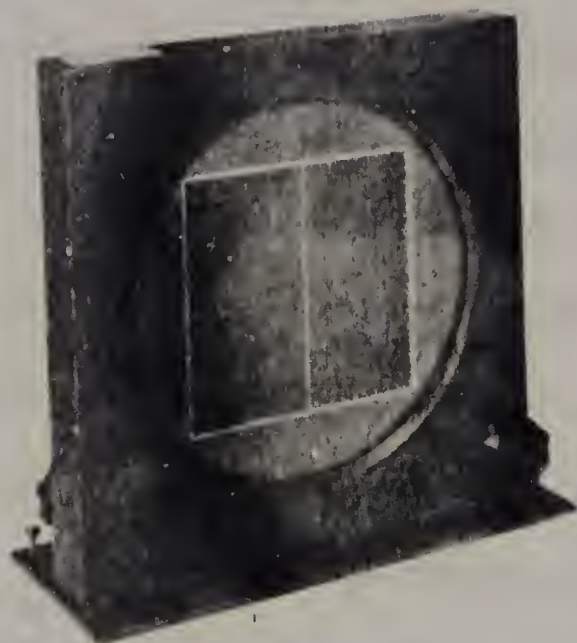


Fig. 1. Rod & Frame Apparatus  
Model PR-1



Fig. 2. Subject seated at lab.  
station used for testing  
with Rod & Frame Apparatus



viewing hole (8.5" in diameter) through which the luminous rod and frame could be viewed. Within the box was constructed a shutter which could be controlled by the experimenter to close the viewing hole when required in the testing procedure. The base of the table surrounding the box-enclosed rod-and-frame apparatus was also covered with soft black bristol board, and on the front edge of the table was also constructed a black facing 32" in height, and extending downward toward the floor for 19". This also extended to the end of the table and prevented any possible cues being provided from any light reflections on the wall behind the apparatus, and visually separated the experimenter completely from the subject. Tactile cues that might be obtained from contact with the machine also were controlled by having the subject report orally to the experimenter his judgment of when the rod was upright. This was felt preferable to having the subject adjust the control knob available for this purpose. The face of the apparatus itself was located 12 inches from the viewing hole.

Eight trials in alternate order (four with frame and rod tilted  $20^{\circ}$  to the right, and four tilted  $20^{\circ}$  to the left) were given each subject in reporting when the rod or line was vertical. Deviations of the rod from the vertical were recorded immediately after each trial, and a subject's score was arrived at by computing the mean of the eight deviations, expressed in degrees. Low scores and high scores were considered to respectively reflect a high and low degree of field independence. These were used as one measure of the subject's level of perceptual differentiation.





Although the adaptation of Witkin's Rod-and-Frame Test is a departure from the actual apparatus used by Witkin, the principle inherent in the task presented the subject, remains the same. Actual measures obtained from the smaller apparatus, however, were expected (as was the case) to differ by being reduced, in comparison to those obtained from similar age groups as reported by Witkin (1964a). Smaller deviations in average scores were expected because of the reduction both in the size of the rod and frame and in view of the fact that the tilt of the patterns was only  $20^{\circ}$  instead of the  $28^{\circ}$  as used by Witkin. The author, however, confesses some initial reluctance to use the new adaptation as a measure of field-independence in view of his inability to find research studies in which it had been employed, and consequently not being sure of how valid a measure it might be. Nevertheless, in noting that the task given the subject of overcoming the influence of the tilted frame in judging the upright did not differ from the task in Witkin's procedures, and finding individual differences when the task was presented on preliminary try-out of the apparatus, the author felt its use was justified, or at least warranted testing. Results with the instrument as adapted to the study offer evidence of its usefulness and validity. Individual variation was found in subjects' performances, and more convincing evidence of construct validity is noted in the obtaining of significant sex differences in the same direction as reported by Witkin (1949, 1964a, 1965). Also significant correlations were found between the measures obtained and scores on an embedded figure test, a further observation reported by





Witkin (1964a) with his rod-and-frame measures.

Reliability of the rod-and-frame measures was also found to be highly satisfactory when investigated by tests of internal consistency. A Kuder-Richardson reliability coefficient of .98 was obtained in applying the test of internal consistency recommended by Ebel (1965). Also a split-half coefficient of .96 was obtained when combined scores on trials 1, 2, 5, 6 (two trials with frame tilted respectively to right and left of subject) were correlated with the combined scores of trials 3, 4, 7, 8 (two trials right-tilt and two trials left-tilt).

(b) The Changing Ambiguous Figure Test, as a Measure of Capacity to Overcome an Initial Set.

In obtaining another specific, but different, measure of ability to overcome an initial set in an ambiguous stimulus situation as indicative of perceptual differentiation, the author used a series of seven two-possibility ambiguous female figures (see Appendix A<sup>3</sup>). The series selected was the one developed several years ago by Asch, Scheerer and Gleitman, and reproduced and referred to by Leeper and Madison (1959, p. 146f). The seven figures in the series are modifications of the actual ambiguous female figure introduced into psychological literature by Boring (1915), and since that time occasionally referred to as the wife-mother-in-law figure. (Leeper, 1935; Hilgard, 1963). Sketch number one of the sequence is arranged with sufficient details to most clearly favor a subject to report his perception of the profile of an old female. The profile of the second figure - a young female - can be organized by a highly perceptive subject, but the elimination



of details in the young profile makes this highly improbable. Sketch number two slightly decreases the contour of the old female and slightly increases that of the young female. The series continues through to sketch seven where the young figure now becomes most clearly outlined and the old figure least clearly outlined and the least favored perceptual organization.

Subjects have been found to vary in their flexibility in achieving the second organization, once having been presented with the picture at either end of the series. (Leeper and Madison, 1959). To break the initial set, it would seem that the elements in the stimulus pattern must be considered apart from this previously adapted organization and arranged in a new organization. Witkin (1964, p. 178) suggests that the capacity to obtain such reorganizations is an aspect of perceptual differentiation in terms of field independence.

The potential usefulness of the above mentioned series as a test of perceptual flexibility occurred to the writer in noting Leeper and Madison's (1959, p. 185) reference to it in their discussion of the capacity to shift perceptual organizations. Since the instrument permits a test of flexibility under conditions where ambiguity can be maintained throughout the testing period, it struck the writer as possibly permitting a somewhat more sensitive measure of the flexibility variable than some similarly obtained measures reported in the literature.

The principle inherent in changing the stimulus pattern transitionally is similar to that used by Frenkel-Brunswick





(1949) as a measure of tolerance for ambiguity. (She used a picture of a dog followed by a number of pictures representing transitional stages leading finally to a picture of a cat, - wherein more rigid adherence to the original organization in the face of the changing stimulus patterns was defined as intolerance for ambiguity.) Measures, employing a similar principle, but using hues and numbers as stimulus material are also discussed by Frenkel-Brunswick, who also comments on procedures used by other experimenters to investigate related aspects of rigidity. (Rokeach, 1943; Goldstein and Scheerer, 1941; Luchins, 1942.) Transitional changes in subsequently presented sketches has also been used as a test of "rigidity" in a study reported by Moffitt and Stagner (1956). In the use of such procedures, it is however, noted that the initial figure or picture presented was one in which the first organization could be quite readily achieved, - in other words, initially low in ambiguity. Consequently one might expect that little "perceptual organizing effort" would be required of the subject. The present writer felt that by increasing the ambiguity of the initial stimulus pattern, while still perceptually biasing the pattern for a certain specific organization to emerge, might increase the difficulty in achieving a definite organization, and once obtained this would be highly resistant to change, particularly for the subject who is low in tolerating ambiguity, or as the variable is used above, in the subject low in perceptual flexibility, or in the capacity for perceptual differentiation. Such a subject would be expected, having dealt with the initial ambiguous situation, to



hold on to his solution to the problem as long as he possibly could, in some cases even right through the series where on the final sketch it is still possible to perceptually maintain the initial organization, even though the changing patterns of stimulation favors and makes it more possible and most likely to change that organization. Since these stimulus characteristics are inherent in the Asch, et al series, the present writer suggests that the series provides stimulus material facilitating a somewhat unique and sensitive test of the perceptual flexibility variable.

Suggestion of the greater sensitivity of such ambiguous stimulus patterns as a measure of flexibility draws some support from the observations of G. Klein (1951) and Witkin (1964a). Klein (p. 336) used a method of projecting, one at a time, fourteen squares ranging in size from two to fourteen inches. After looking at a square, the subject was asked to judge it for size. Subjects were first shown the five smallest squares, then without the subjects' knowing it, square 1, the very smallest square, was removed from the series, and square 6, the largest square, was added. By subsequently subtracting the smallest square and adding the next larger one, the series gradually and transitionally shifted from the smaller end of the range to the larger until all fourteen squares were exposed. In citing extremes of the group of subjects tested by this procedure, Klein (1951, p. 336-337) reports a finding of significant differences between what he termed a "lag-group" which showed reduced adaptation to such changes in making judg-





ments of subsequent presentations of the different sizes, in comparison with a group which shifted appropriately to the stimulus changes. Noteworthy, as support for the greater sensitivity of ambiguous stimulus material in measuring flexibility, is Klein's observation (p. 337) that in those who lagged, inaccuracy was found to be particularly great when a square was no longer vivid, that is, when it was neither the largest nor smallest in a series but somewhere in between. On the other hand, the "non-laggers" are reported to have been less influenced by this increase in ambiguity as the stimulus moved through the series. This finding supporting the rationale of using increasingly ambiguous material as a more sensitive test of perceptual flexibility, draws further support from Witkin (1964a, p. 192), who makes the following observation.

Preferred ways of perceiving are an integral part of the individual's psychological make-up. Under some conditions, when the situation is vague and contains conflicting elements, they play a large role in determining the perceptual outcome. Under other circumstances, as when the situation is clear and compelling, they may have no more than minimal expression.

Whereas the quantitative measure obtained in presenting the subject with the task of changing his initial organization under conditions of a gradually changing ambiguous stimulus pattern is best understood in reference to the procedure employed, the latter shall be described at this point. A subject was presented a picture at either end of the series (alternately one-half of subjects were tested with the sequence old-to-young female, and one-half in the sequence running from young-to-old. Prior to exposure of the initial picture, sub-





jects were verbally given the following instructions:

I am going to show you a series of pictures in which it is possible to see two profiles of two women's faces. One profile is that of an older woman, and the other profile is that of a younger woman. The first picture I shall show you will be one in which it is easy to see just one of the profiles, either the old or young woman. I will let you look at this for 15 seconds to see if you can also see the other woman's profile. I will then present you, one at a time, several other pictures, each for 15 seconds and your task is to tell me when you can see the other profile. Let us start with this one. Which profile do you see?

At this point the initial picture was placed before the subject, and the experimenter began a stopwatch. As soon as the subject reported his organization he was asked to try to see the second profile. After 15 seconds, the picture was removed and subject was presented with the second sketch in the series, with the following comment made by the experimenter:

Remember now you are looking for the profile of the (young or old, depending on which sequence was being used) woman. Can you see her in this one?

Subsequent pictures were presented without comment until subject reported the second organization. When he did report this, to make sure he was actually perceiving the second figure, the subject was asked to outline and describe the figure. If a subject had not been able to locate the second figure by the end of card 7, the examiner pointed the figure out to him, and then went through the series again, using the following instructions.

Now we shall go through the pictures again and your task is to tell me on which of the pictures you can see the other profile. This time I shall let you



look at each picture for 10 seconds.

A subject's score, using the above procedure, was expressed in terms of the actual trial or picture number on which he was able to report the second organization of the profiles. In the case of those subjects who were unsuccessful in achieving the second organization on the seventh picture, a score of 7 was assigned and to this was added the number of the picture in the second presentation that was needed before being able to report the second profile. The highest and lowest possible scores were respectively 14 and 1. Low scores indicated ease in overcoming the initial set or a high level of flexibility. This was taken to represent a high level of perceptual differentiation.

(c) The Capacity to See a Given Configuration Which is Embedded in a More Complex Configuration:

The use of embedded figures in obtaining a measure of perceptual behavior is discussed in detail by Witkin (1950; 1962; 1965). Witkin has suggested that material used by Gottschaldt (1926) is of considerable value in determining the ease with which a person can see a given figure independently of the context in which it is presented. Witkin also reports findings to indicate that subjects' performances on such tasks are consistent with those obtained on other measures of differentiation, such as the rod-and-frame situation (1950; 1964a).

The instrument used in the present study to measure the above mentioned capacity was the Closure Flexibility (Concealed Figures) Test developed by L. L. Thurstone and T.E. Jeffrey and distributed by the Industrial Relations Center, University





of Chicago (Industrial Relations Center Manual, 1965). The Closure Flexibility Test is a pencil-and-paper test which can be administered individually or in groups (see Appendix A<sup>4</sup>). Each item consists of a figure followed by a row of four more complex drawings, some of the latter which contain the given figure in its original size and orientation. Instructions are to look for the given figure in each of the complex drawings and to put a check mark (✓) under each drawing which contains it and a zero (0) under each which does not. In its use, the present author adhered to the recommended time of ten minutes. Scoring was done by a key and a raw score derived by subtracting wrong answers from correct answers. Scores were considered to reflect the extent to which perceptions of the given figure was dictated by the organized context in which it occurs. High and low scores respectively were used as an indication of high and low levels of perceptual differentiation.

Reliability of the Closure Flexibility Test has been determined by measures of internal consistency. Thurstone (1944) reports a split-half reliability coefficient of .78. Pemberton (1951) reports a corrected split-half reliability of .94 on the form of the test used in the present study.

Validity studies have also been carried out with the Closure Flexibility Test, the most relevant to the present study being the finding of Pemberton (1951) in her study of closure factors, in which she reports the test as having a loading of .64 on a second-order factor called analytical ability. Other validity studies are reported by Thurstone



(1944) in which he found performance on Gottschaldt Figures was associated with his reasoning factor. In a more recent study the same author (Thurstone, 1951) found a correlation of .63 between induction (reasoning) and the flexibility of closure factor. Yela (1949) reports a correlation of .59 between a reasoning factor and a perceptual factor he identified as flexibility of closure. Botzum (1950) confirmed the relationship between the reasoning factors and the flexibility of closure factor, in reporting a loading of .64 of the latter perceptual factor on what he suggested was an analytic reasoning factor. These reports are consistent with Witkin's contention that (in Scheerer, 1964, p. 180):

"the style of functioning we first identified in perception, where the person must deal with an immediately-given stimulus configuration, manifests itself as well in intellectual activities, where we are dealing with more symbolic representation."

Witkin, moreover, in the same paper, offers convincing evidence of the relationship between performance on perceptual tasks and performance on tests of adaptive flexibility. It is also of interest to note Pemberton's finding that subjects scoring high on the closure flexibility tests considered themselves on paper-and-pencil personality tests to be socially retiring, not dependent on social conventions, having theoretical interests, and a drive for achievement (Pemberton, 1951). Research conducted by the Chicago Industrial Relations Center also may be cited as evidence of the test's validity to differentiate among occupational groups (Manual, 1965).





(d) The Capacity to Construct a Whole Picture From Incomplete or Limited Material:

This aspect of perceptual differentiation is similar to what Witkin refers to as the structuring aspect of articulated experience. (In Scheerer, 1964). Analysis and structuring are considered by Witkin to be complementary aspects of articulation of experience. After referring to the relationship between cognitive and perceptive experience, Witkin states thus: (In Scheerer, 1964, p. 180f)

This cognitive dimension has been still further extended by the demonstration that people whose experience is relatively analytical tend to show greater structure of experience as well. Let me point out that our studies of the structuring dimension are at an early stage relative to the analytical dimension. Let me emphasize too that we do not presume a sharp separation between these two components of experience. I am sure that in real life they never truly exist apart; it is more a matter of focusing, for purposes of research strategy, on one or the other by creating tasks that, on the one hand, require the breaking up of an organized configuration, or, on the other hand, demand that inherently unstructured material be organized in some fashion. The evidence now available suggests that children who are strongly influenced by the organization of the prevailing field in their perception of an item within it tend to leave "as they find it" stimulus material that is unorganized, and so experience it as poorly structured and vague.

We consider analysis and structuring as complementary aspects of articulation of experience. The person who experiences in articulated fashion has the ability to perceive items as discrete from their background, or to reorganize a field, when the field is organized; and to impose structure on a field, and so perceive it as organized, when the field has relatively little inherent structure.

The structuring aspect of perceptual differentiation as operationally defined in the present study, was appraised by use of a closure speed test, also distributed by the In-





dustrial Relations Center, University of Chicago. Like the Closure Flexibility Test, the Closure Speed Test is a paper-and-pencil test that can be administered individually or to groups (see Appendix A<sup>5</sup>). In the tests are 24 items each of which consist of an incomplete picture drawn in black on a white background. The subject is given the task of identifying and briefly describing the subject of the picture in a space provided for this purpose. The test is timed for three minutes and is reported in the manual (1966) provided by its distributors to be a measure of the speed with which the subject can integrate apparently unrelated parts into a meaningful whole. A raw score is arrived at in terms of the number of pictures corresponding with a scoring key. A maximum raw score is 24.

Pemberton (1951), who constructed the pictures used in the present form of the Closure Speed Test obtained a reliability coefficient of .67 using parallel forms of the test on different days of testing. Later studies are reported in the manual (1966) to have yielded equivalent-form reliability coefficients of .82 or better.

In validity studies positive relationships between performance on the Closure Speed Test are reported in respect to inductive reasoning ability (Pemberton, 1951), ability to visualize a rigid configuration when it is moved into different positions (Psychometric Lab; 1951), mechanical aptitude (Psychometric Lab; 1951), and personality characteristics (Pemberton, 1951). In the present study significant correlations were obtained between performance in this test, (pro-



viding some evidence of Witkin's contention that analytic perception and structuring are complementary components of perceptual differentiation) and the Closure Flexibility Test. Correlation coefficients of  $+.37$  for a combined group of high school and college girls and  $+.32$  for males from similar groupings, were found to be significant at the  $.01$  level. It was, however, noted that it was the younger (grade X high school girls and boys) whose performances on the two tests showed the highest degree of relationship, relationships being  $+.52$  for the X girls and  $+.47$  for the X boys. (Both significant at the  $< .01$  level). Relationships, although in the same direction, did not reach an acceptable level of significance in older college boys and girls. This, of course raises a provocative question of some developmental factor operating in explaining this observation, but a question which is beyond the scope of the present study. (However, the finding in reference to the sample of college subjects used in the present study would seem to be sample-specific for some unexplained reason, when it is noted that a group of college students still older than those in the present study, showed a significant relationship of  $+.42$  between their performance on Mooney's Closure Speed Tests and Gottschaldt Figures. (Rabe, 1955). The basic theoretical principles underlying the latter tasks are similar to those in the Closure Flexibility and Speed Tests used in the present study.)

In the present study, high and low scores on the Closure Speed Test were respectively considered suggestive of high and low levels of perceptual differentiation.





(c) A Perceptual Differentiation Index:

An index reflecting perceptual differentiation was derived by constructing composite scores from each subject's performance on each of the measures described above. A precedent for grouping different perceptual measures to arrive at such a perceptual index is provided by Dyk and Witkin (1965). However, Witkin and Dyk kept their structuring measure, which was based on response to Rorschach cards, separate. This was not considered necessary in the present study in view of the direction of the correlations with the Closure Flexibility test and other measures, and as the structuring aspect of differentiation was not being singled out for any special reason.

3. Socioeconomic Status:

A crude socioeconomic status rating was obtained by using Table VII provided by McGuire and White (1955). This was used by these authors as one component in arriving at their reported measure of social status, and is a modification of that in Warner's revised scale (Warner, 1949). This crude measure of socioeconomic status (see Appendix A<sup>6</sup>) was considered sufficient in the present study where in respect to the social class variable, only a rough indication of possible differences was considered necessary. The relationship of socioeconomic status to perception of parents or to perceptual differentiation, although in itself an important research problem, was not the main focus of the current study. Occupation of a subject's father was obtained from school records for the high school group and from a 'guidance summary form' questionnaire completed by the college group.



### III SUBJECTS AND PROCEDURES:

#### 1. Subjects:

One hundred and forty-seven young men and women for whom complete data had been collected, and who are attending school or college in a southeastern Alberta city of approximately 26,000 population, served as subjects in the present study. Seventy of these were males and seventy-seven were females. Forty-six of the latter were grade X students (ages 15 and 16, with mean age of 15.4) taking an academic stream of courses in the city high school, and thirty-one (mean age of 19.1) were enrolled in a first-year university program at the local Junior College. Complete data was obtained for thirty-eight of the males also attending the college, (mean age 18.9), and for thirty-two males enrolled in the grade X academic program of the city high school (mean age 15.4). Socioeconomic status of the groups as obtained from occupational rating (McGuire and White, 1955) indicated the groups to come predominantly from lower-middle to upper-middle class backgrounds. There were no significant differences among the four groups with one exception. The grade X girls differed from both the college males and females in having a slightly higher, but statistically significant average socioeconomic status rating, with more of their fathers tending to come from the business and professional occupational groupings.

#### 2. Procedures:

##### (a) Data Collection of Predictor Variable Measures:

Following the instructions on the test booklet (see Appendix A<sup>1</sup> and A<sup>2</sup>), both forms (Mother and Father) of the PCR





were completed by the college subjects at the beginning of the college year, coincident with the time scheduled for the testing program of the first-year students. After completing a scholastic aptitude test which took approximately one hour, the subjects were asked to complete the PCR forms, and a personal information questionnaire, as part of a research project. They were told that this project was being conducted by the writer (who was known to them as the Director of the College Counselling Services.) Verbally, the experimenter attempted to enlist the cooperation of the subjects by informing them that their responses would be kept confidential, and would be used in research only, and not go into the college records. They were also told that they would be fully informed of the project after its completion. They were asked to respond to the items as accurately as possible, in reference to their own situation. The subjects were also given numbered filing folders. They were asked to put their names on the latter and then to copy the number onto their PCR booklet. Following this procedure, no names were written on the PCR questionnaire. The PCR data that was collected was left on file until the perceptual measures were obtained on all subjects. The purpose of not inspecting PCR scores until the criterion variable measures were collected was to eliminate any possible experimenter expectancy effect in obtaining perceptual measures. The extraneous variable of experimenter bias has in recent years been given a great deal of research attention by Rosenthal (1964), whose findings indicate the potency of this variable in influencing experimental research results, and the





desirability of its control.

The high school subjects completed the PCR questionnaire later in the year (January), as a total group following similar procedures and using the following initial instructions:

I am providing you with a chance to take part in some scientific research, and would very much like to have your full cooperation in this. Today, as a start, I would like you to complete two questionnaires about ways you have seen your parents behave toward you. Your answers will be kept strictly confidential and will be used only as research data. I mention this as it is very important that you answer each question as it applies to you without any worry or concern about how your replies will be used. Otherwise, the data collected will be of no use.

I might also say, at this time, that I plan to see each of you for a few minutes in the coming months in my lab where you will be asked to do some simple tasks.

I am also going to ask that you do not discuss the project with anyone until completed. When completed in two or three months from now, I shall meet with you to discuss the project if you so wish.

As in the case of the college subjects, the group was asked to put their names on a numbered file folder and to copy this number on the PCR booklet. They were also read the instructions for completing, first the Mother-form, then the Father-form of the PCR, as was the procedure followed with college subjects. Before beginning to answer the items, subjects were given the final instruction.

Remember the responses you give will be kept strictly confidential. There are no right or wrong or best answers. How an item applies to you is the important thing.



(b) Data Collection of Criterion Variable Measures:

(1) The first two perceptual measures (rod-and-frame and changing figure) were obtained by individually testing subjects in a room designated as the psychology laboratory. The latter was located to the side of the college gym stage, and was of optimum location in reference to control of lighting effects in obtaining the rod-and-frame measure. The Lab contained no windows, and the surrounding stage, excepting in two or three instances, was able to be kept in darkness. The Lab then could be controlled to exclude any light, except that of the luminous rod-and-frame.

On a scheduled appointment with the experimenter, the subject was met on the stage and asked to put on a pair of goggles. The goggles had been prepared so as to prevent any light entering the subject's field of vision. He was then led into the Lab to a chair located so that his seated viewing distance from the face of the apparatus would be between 4 to  $4\frac{1}{2}$  feet. The experimenter then went behind the Lab station and when seated, turned on the apparatus, having previously set the tilt of the luminous rod-and-frame  $20^{\circ}$  to the right of subject. A dimmed light behind the station which had been left on until this point, was turned off and subject was asked to remove his goggles. After about ten seconds, during which there were comments about the fact that removal of goggles still left subject in the dark, the experimenter instructed the subject to sit erect and look forward as the experimenter was going to show him something. The experimenter then removed the shutter which, up to this point, shut off any view





of the luminous rod-and-frame from the subject. Subject was asked to report what he saw, in order for experimenter to be sure he had the pattern in view. He was then given the following instructions.

I am slowly going to move the line and what I want you to do is to tell me when I have moved it to an upright or vertical position. Some people see it already as in this position and ask me not to move it at all. Others want me to move it so as to make it upright. I will begin moving it slowly and you are to tell me when it appears upright or vertical to you. If I should move it beyond that point, let me know and I'll adjust it until you are sure it is vertical. Do you understand? (Most subjects readily understood the nature of the task.) O.K. here we go.

The experimenter slowly moved the line via a control knob provided for this purpose towards the position of the true upright. When a subject reported his judgment, the viewing hole was closed by the experimenter in manually moving a rounded edge, black faced shutter horizontally across the viewing hole. Subject's judgment in terms of degrees from the true upright was read from the dial, located for this purpose at the rear of the machine, and recorded. The rod-and-frame was then tilted  $20^{\circ}$  to the left of subject, and again exposed and subject's judgment recorded in like fashion. This procedure was repeated until 8 judgments had been obtained from a subject, four with the pattern tilted to the left and four with the pattern tilted to the right. Subject's score on the test, expressed in terms of the degrees by which his judgments erred from the true upright, was obtained by averaging the results from his eight trials.

(2) The Changing Ambiguous Figure situation. Follow-



ing the completion of trials in the rod-and-frame situation, lights were put on in the Lab, and subject asked to sit at a table in front of a small  $8\frac{1}{2}$ " x 11" rectangular patch of paper. The latter served as a location for placing the 15 second trial ambiguous figures in the series which has been described in a previous section of the present chapter. (Section II, 2(b)). Using the procedures also described in that section, the experimenter obtained a measure of the subject's performance on this task. After this task was completed, the experimenter asked subject whether he had had any previous experience or contact with these or similar figures. One of the high school subjects reported having been shown a similar figure by an older sister. Several of the college students had previous acquaintance with the figure, and it was noted that this made the task an easy one for such subjects. This made it necessary to later test for the effect of previous experience for the college group. The results of this check indicated that such experience had significantly affected their performance, thus invalidating the use of this test as a perceptual measure for the purpose intended. Consequently, the results of this test could not be used in subsequent data analysis with the college group.

It is also to be noted that a different sequence (old-female to young-female; and young-to-old female) was used for alternate subjects. A subsequent test for sequence effects, indicated no significant differences in performances on the different sequences. There was however, a tendency (although not significant as was indicated above) for subjects to find





the sequence "young-to-old" an easier one to reorganize in the task of locating the second figure.

At the end of a Lab testing session, each subject was asked for his cooperation in not discussing the nature of the tasks with anyone until all subjects had been tested. In doing this, the experimenter casually pointed out the reason for this in a scientific study of this kind. Each subject was also told that he would have any questions frankly answered when the experimenter met with them as a group on some future date. Subjects' spontaneous comments about the silence and "tight-lipped" behavior of former subjects, offered reassurance that this control was effective.

### (3) The Closure Speed and Closure Flexibility Measures.

The above measures were obtained in a group setting, the majority of the subjects being tested together in their respective groups (high school and college). The instructions and procedures followed were those outlined in respective manuals and described in Section III (d) of the present chapter.

The obtaining of subjects' responses on these tests completed the testing. Following this, in the same sitting, the project was discussed with subjects and their questions were frankly answered as had been promised. Many subjects expressed interest in the study and in knowing the final results.

### (c) Statistical Analysis and Procedures:

(1) Perceptual Differentiation Index: In arriving at a perceptual differentiation index, a composite score of the four perceptual measures (rod-and-frame, changing figure, closure speed, closure flexibility) was computed for both sexes





making up the high school groups. A composite score of the three perceptual measures (rod-and-frame, closure speed, closure flexibility) was also computed for the separate sexes in the college groups. The method used in deriving the differentiation index was that employed by Dyk and Witkin (1965) in arriving at their "perceptual index." (Personal communication - Witkin, 1967). This simply involved computation and subsequent addition of standard scores of the separate measures, taking care, in the present study, to reflect the rod-and-frame and changing figure scores (since high scores on these represented low differentiation.)

(2) Hypothesis Testing: Studies reported in the literature in which PCR scores have been used as predictor variables have usually employed correlational methods (Personian  $r$ 's) in statistical analyses (Medinnus, 1965; Siegelman, 1965; Baer and Ragosta, 1966). Medinnus (1965) has also made use of Fisher's "t" in testing for mean PCR-scale differences between groups. Similar methods were followed in the present study in examining relationships between PCR scores and criterion variables. Personian  $r$ 's were first computed in order to examine the relationships between the scores on each of the PCR scales (for both the Mother and Father forms) and each of the perceptual differentiation measures that had been obtained. This was done separately by sex for boys and girls from each of the high school and college groups. Similarly, correlation coefficients were computed between PCR scales and the perceptual differentiation index, for the same four groups. An examination of the resulting coefficients permitted one to ascer-



tain in part the tenability of the hypothesis. For convenience of future discussion this approach in the analysis is referred to as Part A.

A second approach in data analysis used in hypothesis testing is referred to as Part B. In this approach, subjects whose scores on the perceptual differentiation measures (also on the differentiation index) fell into the top and bottom one-third were designated as exhibiting a high (or higher) level of perceptual differentiation on a particular measure; and the latter (bottom one-third), a low (or lower) level of differentiation. Separate groups were in this way constructed for the different sex and academic level groups. This made it possible to test for differences on PCR scales between subjects high and low in levels of perceptual differentiation on each perceptual measure, in the groups of high school girls, high school boys, college girls and college boys. The resulting numbers of subjects in each of the comparison groups are as follows. (For high school boys, eleven; for high school girls, sixteen; for college boys, thirteen; for college girls, eleven.)

In keeping with the hypothesis, the prediction was that the subjects in the high differentiation level groups would obtain higher mean scores on the PCR scales of loving, casual, and symbolic-love reward; but obtain lower mean scores on the PCR scales of protecting, demanding, rejecting, neglecting, symbolic-love and direct-object punishing, and direct-object rewarding. Fisher's "t" was employed in testing for significance of differences in PCR scale means.





### (3) Factor Analysis of PCR:

Whereas the specific hypothesis of the study in predicting the direction of relationships relied on reported loadings of PCR subtests on the factors isolated by Roe and Siegelman, it would be necessary to assume that similar factors and loadings would have emerged in the samples used by the present author. This assumption was tested by factor analyzing the PCR data obtained in the four groups (high school girls and boys; college girls and boys). The principle components method with subsequent varimax rotation, was used in the factor analysis done for each group. The three factors which were extracted for the separate groups, are essentially the same as those reported by Roe and Siegelman (1963) and Siegelman (1965), and accounted for the major part of the total variance (see appendix A, Tables I, II). The general factor picture is also much the same as respects direction of loadings. Although changes as respects percentage of total variance accounted for by a factor, is noted for all groups except the college girls, this does not affect the direction of the loadings or seriously interfere with the interpretation of the factors.

In all groups, except the high school boys, the Love-Reject Factor accounted for the greatest part of the total variance on the Mother scales. The Casual-Demand Factor accounted for the highest percentage of total variance in the high school boys group, whereas the O-Factor and the L-R Factor contributed a similar proportion to the total variance. Regarding the Father scale, for the high school boys, the L-R



Factor accounted for the greatest percentage of the total variance. In the high school girls this factor and the Casual-Demand one contributed a similar percentage to the total variance. In the college boys group the L-R Factor shared an equal percentage of the total variance with the Overt-attention Factor, (on Father-form.) Approximately equal contribution of the three factors to the total variance was observed in the high school boys group on the Father Form.

When interpreting findings from the study, the author will, when relevant, make reference to specific characteristics of the factors and PCR scale loadings. This will be done when, for any group, these bear on the predictions made by the hypothesis. This is necessary in view of the finding that in some instances some scales for some groups (particularly college boys) yielded different factor loadings than those reported by the PCR authors.

The following chapter discusses results obtained from the statistical analyses of the collected data.





## CHAPTER IV

### RESULTS AND DISCUSSION

The analyses and procedures used in the testing of the hypothesis yielded the results which are summarized below in tabular form. Findings from each of the separate parts of the data analysis (Part A - correlations; Part B - differences in PCR scale means between groups in top and bottom one-third of the distribution on differentiation measures) are discussed for each of the four separate sex and age or academic level groups. It is also to be noted that relationships that fail to reach a statistically acceptable level of significance (.05 or .01,) but do so at the .10 or  $< .10$  level are referred to as tendencies to indicate a relationship. Two-tail tests were employed in determining which correlation coefficients were significantly different from zero. A one-tail test was used in examining the hypothesized direction of PCR category differences in means of the extreme groups (high vs. low level performers on perceptual measures) in respect to the Part B analysis. Tables II, V, VIII and IX summarize the findings in reference to Part A of the analysis and Tables III, IV, VI and VII those in reference to Part B. In all tables, R/F will refer to the rod-and-frame test; C/Fg to the Changing Figure task; C/Sp to the Closure Speed test; CFlx to the Closure Flexibility test; DIIdx to the differentiation index; and SES to socioeconomic level rating. It is also to be noted that on the correlational tables, the R/F, C/Fg scores, and SES ratings have been reflected so that higher scores would mean increasing differentiation and higher socioeconomic





status.

# 1. HIGH SCHOOL GROUPS

## A. Results: Analysis Part A

Table II indicates the intercorrelations between each of the perception of parent categories (as determined from PCR scores) and the perceptual differentiation measures for the high school boys and girls groups.

### (1) High School Boys (N = 32)

One observes from Table II that the only relationship between the high school boys' perceptions of parents and field independence (the latter as determined in the rod-and-frame situation) is on the casual category of the PCR Mother Form ( $-.41$  at  $< .05$  level). This is in the opposite to predicted direction. The possibility of the casual scale for mother showing loadings on a factor different from that reported by the PCR authors was considered. Examination of intercorrelations and loadings on the various factors, revealed that this was not the case. The casual category for mother clearly showed a positive loading on the Casual-Demand Factor, and with only one exception, intercorrelations of the casual scale with other PCR categories were in the expected direction. A slight possibility, however, was indicated for low casualness in mother to be associated with low symbolic-love reward ( $r$  of  $.35$ , sig.  $< .05$  level), and for casual to load on the Overt-attention Factor ( $+.35$ ). This slight tendency for casualness to be associated with the O-Factor (Protectiveness) in the high school boys may explain the counter-to-predicted relationship. A tendency is noted for the predicted relationship to occur



TABLE II - INTERCORRELATIONS AMONG PCR SCORES, SES, AND PERCEPTUAL DIFFERENTIATION MEASURES FOR HIGH SCHOOL GROUPS

PCR Categories	Girls (N = 46)					Boys (N = 32)						
	R/F	C/Fg	C/Sp	CFLx	Didx	SES	R/F	C/Fg	C/Sp	CFLx	Didx	SES
Protect. (+O)	-09	-29*	-13	08	-17	-27 <sup>T</sup>	-18	-02	00	01	-07	-06
Punish. S-L (-LR&CD-)	-10	-17	03	06	-07	-26	-17	14	-10	-53**	-26	-09
Reject. (-LR)	-11	02	-03	06	-02	-12	-05	11	-08	-04	-02	10
Casual (+CD)	05	18 <sup>T</sup>	09	-05	11	-01	-41*	-17	05	23	-12	-03
Reward. S-L (+LR; O+)	-09	-24	07	16 <sup>T</sup>	-05	-30 <sup>T</sup>	-13	-14	-23	-10	-23	10
Demand. (-CD)	-13	-06	-08	28	01	-27 <sup>T</sup>	12	03	-06	-16	-02	18
Punish. D-O (-CD)	-10	-17	-22	00	-20	-24	00	10	-12	-44*	-18	06 <sup>T</sup>
Loving (+LR)	-07	-14	21	05	02	08	16	-03	-06	11	07	33
Neglect. (-LR)	07	-21 <sup>T</sup>	-09	-15	-16	-10	-28 <sup>T</sup>	01	02	-01 <sup>T</sup>	-10 <sup>T</sup>	-24
Reward. D-O (+O)	-15	-28	05	11	-11	-21	-29	10	-26	-33	-31	05
Percep. of Father												
Protect. (+O)	-11	-30*	-05	-03	-20	-03 <sup>T</sup>	-10	-27	-09	-03	-19	-24
Punish. S-L (-LR&CD-)	-01	-20	-05	08	-07	-26	-09	21	-10	-15	-05	02
Reject. (-LR)	09	-07	-08	10	02	-34**	-23	26	02	05	04	14
Casual (+CD)	-17	-12	21	03	-02	13	-19	-24	25	08	-04	-06
Reward. S-L (+LR; O+)	-08	-38**	08	05	-13	-16	06	-09	-27	-15	-17	05
Demand. (-CD)	09	-02	-10	12	04	-35**	14	11	-07	12	12	23
Punish. D-O (-CD)	13	-21	-15	13	-04	-44**	01	25	-03	-35*	-05	-04
Loving (+LR)	-13	-18	13	-08	-11	27 <sup>T</sup>	27 <sup>T</sup>	-19	-19	-16	-10	14
Neglect. (-LR)	07	07	-01	11	10	-18	-33	08	07 <sup>T</sup>	17	00 <sup>T</sup>	05
Reward. D-O (+O)	-13	-22	16	14	-02	-20	-22	05	-31	-38*	-34	-10
SES Rating	06	-05	10	-25 <sup>T</sup>	06	--	-25	04	-01	30 <sup>T</sup>	-20	--

Note: - The decimals have been omitted. - The letters in parenthesis designate the factors on which each of the PCR categories are reported to load most highly. The + or - signs indicate the directions of the loading.

\* - sig. at .05 level; \*\* - sig. at .01 level; T - sig. at .10 level and considered to represent a tendency





for the category of direct-object reward on the Mother-form. This category shows a high positive loading on the O-Factor for this boys group. A tendency is also observed for the neglect category on the Father-form to correlate negatively with field independence. This also is in the predicted direction.

No significant relationships or tendencies are found in the high school boys group between PCR scores and flexibility as measured on the changing ambiguous figure task. However, one observes a tendency for a predicted relationship to occur between direct-object reward by the father and structuring (Closure Speed test) in this group. All relationships revealed are in the hypothesized directions as regards the measure of analytical perception (Closure Flexibility Test). Low symbolic-love punishment in mother, low direct-object punishment by both parents and low direct-object reward by father are all found to be related to higher analytical perception in the group of high school boys (all sig. at  $< .01$  or  $.05$  levels). The direct-object reward category on the PCR mother-form also tends to support the predicted direction for this group. One also notes a tendency for higher socioeconomic status ratings to be associated with a higher capacity for analytical perception. Higher socioeconomic status also tends to be associated with seeing mother as more loving in the high school boys group.

In reference to the differentiation index, it is observed that the use of composite scores in arriving at the index adds little information and tended to obscure the relationships that occurred in regards to the individual components comprising the index. It would appear that certain aspects of per-



ceptual behavior may be differentially influenced according to one's sex or age group in respect to relationships between perceptions of parents and specific components of behavior referred to as perceptual differentiation. This becomes clearer as one notes the suggested developmental differences revealed by the findings for other sex and age groups, to be reported below. In using common weightings as is done in the use of standard scores in arriving at a composite measure, considerable information is lost. In order to avoid such loss, the present writer considered it advisable to do an analysis on the separate components of perceptual functioning as well as on the composite index.

Only two tendencies in the predicted direction were noted in the high school boys on the differentiation index. Negative relationships tended to be significant on the direct-object reward category for both parents, almost reaching a .05 level on the father scale.

(2) High School Girls (N = 46)

As indicated in Table II, no relationships were found between high school girls' perceptions of parents and field independence on the rod-and-frame test. Inspection of this table on the other hand, reveals that their perceptions of parents' behavior toward them appears to have a greater impact on the flexibility component of perceptual differentiation (changing ambiguous figure) than on other perceptual behavior assessed in the study. The hypothesized relationships are found to be statistically significant for the PCR protective categories on both the Mother and Father-forms, in rela-





tion to this perceptual component. A tendency for the direct-object reward category on the Mother-form is also in the predicted direction. However, one observes a relationship in what appears to be the opposite to the predicted direction for the symbolic-love reward category on the Father-form. A tendency in the same direction is noted for the same category on the mother scale. Inspection of the correlations and factor loadings of these PCR categories for the high school girls group reveals a ready explanation for what appears to be an opposite to hypothesized relationship. The predictions in the hypothesis were made on the basis of the PCR authors' reported findings which emerged from their factor analytic studies. Their subjects, however, came from a different population of subjects in contrast with the present sample of high school girls. In view of this, factor analysis of each groups' PCR measures was carried out. In respect to the high school girls group, this proved to be highly important in interpreting the finding as regards the symbolic-love category. This category shows a somewhat different loading with the high school girls used in the present study, than reported by the PCR authors in their samples. In the group of girls used by the writer, symbolic-love reward on both the Mother and Father-forms shows its highest loadings (.89, Mother-form; and .79, Father-form) on the Overt-attention Factor and is associated with over-protectiveness. In view of this observation, what appears to be an opposite to predicted direction of a relationship, actually offers considerable support to the hypothesized relationship between low over-protection categories and capa-





city to function at a high level on perceptual differentiation measures.

As in the high school boys group, no relationships were found between the high school girls' perceptions of parents and their performance on the structuring task (Closure Speed Test). There is, however, a tendency for an opposite to predicted relationship to occur between PCR-Demand in mother and analytical perception (Closure Flexibility Task). This suggests that high demand by mother tends to be associated with a higher capacity for analytical perception in the girls. This was a finding similar to that of the high school boys group where low casualness (the orthogonal component of demand on the C-D Factor) was associated with a high level of field independence.

It is also of interest to observe that in the high school girls, lower socioeconomic status is associated with a higher capacity for analytical perception. This is the reverse of the case for high school boys. It is, however, important to keep in mind the likely restriction of range for the high school girls group. Few of these reported fathers whose occupations were below a lower middle class rating (teachers, business owners, managers, etc); and also that this group of girls represented a slightly higher socioeconomic status rating than the other groups in the study. Keeping these facts in mind, it is of further interest to note the correlations of PCR categories with socioeconomic status ratings for the high school girls. One observes that higher symbolic-love reward (interpreted as protectiveness for the girls) in mother



is associated with lower socioeconomic status ratings (.05 level of sig.) and that on the Father-form lower socioeconomic status is associated with higher rejection, higher demanding and higher direct-object punishment (.01 level of sig. and all load negative on LR & CD Factors). Several tendencies are also revealed for perception of mother as protective, symbolic-love punitive, demanding, and direct-object punitive to be associated with lower socioeconomic status ratings. One also notes a tendency for lower socioeconomic status to be associated with perceiving father as more punitive and less loving. When one observes the tendency for analytical perception in the high school girls to be negatively related to high socioeconomic status, a trend is suggested for the more analytically oriented girls to see their parents as relatively negative in relationship with them. Although it is not possible to be definitely unequivocal about this trend, it is of interest in view of the finding which emerged from an analysis of sex differences in perception of parents, that boys in the study saw father as more punitive and mother more neglecting than did the girls. Since boys also did better on the analytical perception tasks, one might speculate that the greater similarity of girls' perceptions of parents to those of boys, the more capacity they show for analytical perception. This speculated relationship, however, does not draw support from Seder's finding (1957) that field independent (by performance on embedded figures test) boys, but not girls, were more often punished by their fathers, and homes of field dependent girls were characterized by less warmth and greater hostility.





For reasons similar to those discussed under high school boys, the differentiation index showed no relationships to PCR scores in the high school girls group.

B. Results: Analysis, Part B.

(1) High School Boys: High (N=11) vs. Low (N=11) Levels of Perceptual Differentiation.

Table III summarizes the results of the comparisons of PCR category means of high school boys respectively high and low in regards to being at the top and bottom one-third of the distribution of their scores on separate perceptual differentiation measures employed in the study. This table reveals that the differences in means (sig. at .05 level) are in the hypothesized direction for both mother and father on the PCR categories of loving and neglect in respect to performance on the rod-and-frame measure. The more field independent high school boys report their parents as higher on the loving and lower on the neglect category. There is also a tendency for the high level boys (in rod-and-frame situation) to perceive their mother as less protective than the low level boys. It is found, however, that the differences in regards to the casual categories for both parents and the demand category for father are counter to the hypothesized directions. The high school boys who show a relatively higher level of field independence in the rod-and-frame situation see both parents as less casual and father as more demanding. Inspection of the factor loadings and correlations of these categories are in line with expectations based on the PCR authors' findings. This was previously noted when the present





TABLE III - DIFFERENCES BETWEEN MEANS ON PCR SCALES OF SUBJECTS OF HIGH VS. LOW LEVELS OF PERCEPTUAL DIFFERENTIATION IN A GROUP OF HIGH SCHOOL BOYS

PCR Categories	Perceptual Differentiation Measures											
	Rod/Frame			Changing Figure			Closure Speed			Closure Flex.		
Perc. of	$\bar{X}$	L.L.	t	$\bar{X}$	L.L.	t	$\bar{X}$	L.L.	t	$\bar{X}$	L.L.	t
MOTHER	H.L.	(N=22)		H.L.	(N=22)		H.L.	(N=22)		H.L.	(N=22)	
Pro.	37.7	40.6	1.45 <sup>T</sup>	38.5	38.3	.08	38.4	38.4	.00	37.2	37.8	.25
Pun. S-L	27.1	27.7	.32	29.1	26.9	1.14	27.3	28.8	.84	24.6	29.6	3.01**
Rej.	27.6	28.4	.34	29.7	27.2	.77	27.7	27.6	.03	26.4	26.1	.11
Casual	39.9	47.1	2.10*	42.0	45.8	1.18	43.8	40.6	.87	46.1	42.6	.99
Rev. S-L	36.0	34.9	.57	35.3	35.9	.28	33.0	35.9	1.19	34.6	36.1	.67
Dem.	46.3	43.6	.96	44.5	43.8	.18	43.7	46.2	.71	43.0	42.8	.05
Pun. D-O	26.4	22.7	1.16	26.6	23.7	1.04	22.9	26.1	1.12	20.6	26.8	2.16*
Loving	61.4	57.6	2.17*	58.6	57.5	.35	56.3	59.6	.96	58.7	57.2	.62
Neg.	23.6	26.6	1.89*	25.0	24.8	.11 <sup>T</sup>	25.4	24.3	.56	24.0	25.5	.74
Rev. D-O	25.9	27.5	.58	28.2	24.2	1.36 <sup>T</sup>	23.6	28.2	1.70*	23.2	28.2	1.70*
FATHER												
Pro.	37.5	40.1	.88	36.9	40.8	1.40 <sup>T</sup>	38.8	39.4	.19	38.0	40.3	.74 <sup>T</sup>
Pun. S-L	26.6	24.7	.81	28.6	24.5	1.96**	24.9	25.4	.19	23.5	26.4	1.42 <sup>T</sup>
Rej.	29.2	32.0	.90	33.7	28.8	1.37 <sup>T</sup>	30.8	29.3	.43	29.6	27.6	.70
Casual	39.5	45.5	1.68*	40.5	46.1	1.59	44.6	39.5	1.28 <sup>T</sup>	44.4	42.9	.41
Rev. S-L	33.8	30.7	1.07	32.5	32.0	.14	29.1	33.1	1.30	29.4	33.1	1.22
Dem.	50.3	43.3	2.06*	48.9	45.6	1.00	48.0	49.1	.30	46.7	44.5	.67
Pun. D-O	26.3	23.3	1.05	28.7	23.6	2.22*	25.0	25.7	.28	22.5	27.3	1.79**
Loving	58.5	50.6	1.92*	52.6	54.4	.33	50.5	55.8	1.18	50.2	56.5	1.53 <sup>T</sup>
Neg.	26.4	33.0	1.87*	30.3	29.4	.23	30.6	29.2	.39	32.0	26.6	1.58
Rev. D-O	25.6	26.8	.40	27.4	25.3	.77	21.6	27.3	1.95*	22.6	29.2	2.40**
SES	2.8	3.8	2.68**	3.6	3.6	--	3.9	3.6	.62	3.5	4.4	2.29*
										3.1	3.9	1.84 <sup>T</sup>

Note: H.L. and L.L. refer to high and low levels of differentiation on test used  
N-refers to total number in the groups, i.e. 11 in H.L. and 11 in L.L.  
\*-p < .05; \*\*-p < .01; T-p < .10 one-tail tests except for SES  
SES - lower the number, the higher the SES





writer reported a similar finding in discussing Part A of the analysis. The picture then seems to be that relatively field-independent boys perceive their parents as somewhat more demanding and less casual, but this demanding is associated with also seeing their parents as relatively high in loving and low in neglect. It is also observed that the high level performers in the rod-and-frame situation came from homes where the father's occupation represented a higher socioeconomic status rating (teachers, business owners, managers, etc.)

The differences found between high and low level performers on the changing ambiguous figure measure are reverse in direction to that hypothesized. The higher level performers on this task see father as more punitive (both S-I and D-O). These scales show high negative loadings (.68 and .81) on the Casual-Demand Factor for the high school boys on the PCR Father-form, and offer support to the picture observed in the rod-and-frame situation in respect to this factor. The tendency for the HL (high level) boys to see father as less casual and more rejecting further supports this interpretation.

Table III reveals that all significant differences between high and low level differentiation on the structuring (C/Sp) and analytical perception (CFlx) tasks are in the hypothesized directions. On both of these perceptual tasks, the HL boys report both parents to be lower in direct-object reward (sig. at .01 and .05 levels). In the high school boys group, this category for both Mother and Father-form, load highly on the Overt-attention Factor which appears to represent over-protection and indulgence by parents. The tendency for the HL



boys to perceive father as low on the symbolic-love reward category further supports the picture of low protectiveness being associated with a higher capacity on the structuring tasks, when the high factor loading (.86) of the symbolic-love reward scale on the O-Factor is seen upon examination of the factor picture.

Table III also reveals predicted differences between the HL and LL boys on the analytical perception task on the punishment scales. The HL boys see mother as less punitive (both SL & DO), and contrary to Seder's (1957) finding with younger children, also see father as less punitive (sig. at .05 level on PCR-Father for D-O Punitive and tends to be sig. for S-L Punitive). The finding as respects punitiveness in father is, however, inconsistent with that obtained on the changing figure task, which offers support to Seder's observation. The tendency for the HL boys to perceive father as less loving than LL boys may be partly explained by the medium loading (.59) of the loving scale on the O-Factor for high school boys. A similar explanation of the tendency for the HL boys also to see their father as more neglecting than LL boys cannot be offered. It is, however, noted that a relatively high negative  $r$  of  $-.90$  is attained between the loving and neglecting scales.

Similar to the relationship observed when discussing Part A of the analysis, the HL boys show a slightly higher socioeconomic status rating than the LL boys which are compared in the analytical perception task.

Findings in respect to the differentiation index add





little to the above picture. Keeping in mind the factor loading of the symbolic-love reward scale for PCR mother in the present group of boys, all significant differences and tendencies revealed are in the predicted directions. The overall findings from Part B of the analysis in respect to the high school boys, offer support to those emerging from the testing of Part A. In addition, by selecting the relatively extreme groups, a clearer picture of PCR differences in the high and low level differentiators was attained.

(2) High School Girls: High (N=16) vs. Low Levels  
(N=16) of Differentiation:

Table IV reveals the results of the comparison of PCR scale means of high school girls' respectively high and low on levels of differentiation on the various perceptual measures. No significant differences are revealed. All that is found is a tendency for the HL girls on the structuring task (C/Sp) to see their mothers as less rejecting and more loving than the LL girls. On the analytical perception task they tend to see their mother as more demanding and father as more neglecting. Socioeconomic status rating of the HL girls is also lower than for the LL girls. These trends have already been observed under the discussion of findings from data, Part A of the analysis. It is also noted that the relationships reported on the changing figure test under Part A, although in the same direction, do not reach a sufficient mean difference to be significant with the reduced number in cases necessitated by the selection of the relatively extreme groups.



TABLE IV - DIFFERENCES BETWEEN MEANS ON PCR SCALES OF SUBJECTS OF HIGH VS. LOW LEVELS OF PERCEPTUAL DIFFERENTIATION IN A GROUP OF HIGH SCHOOL GIRLS

PCR Categories		Perceptual Differentiation Measures										Diff. Index			
		Rod/Frame		Changing Figure		Closure Speed		Closure Flex.							
Perc. of	$\bar{X}$	(N=32)	$\bar{X}$	(N=32)	$\bar{X}$	(N=32)	$\bar{X}$	(N=32)	$\bar{X}$	(N=32)	$\bar{X}$	(N=32)			
	H.L.	L.L.	t	H.L.	L.L.	t	H.L.	L.L.	t	H.L.	L.L.	t	H.L.	L.L.	t
MOTHER															
Pro.	41.6	41.0	.22	39.4	42.0	1.02	38.3	40.8	.93	41.8	40.4	.46	41.8	41.1	.22
Pun. S-L	25.8	26.4	.27	25.9	24.7	.55	25.4	24.5	.40	26.3	25.4	.36	25.7	25.6	.06
Rej.	24.9	26.5	.48	24.3	24.3	.03	23.8	23.3	.30	26.9	23.9	.93	24.6	25.3	.30
Casual	42.6	41.6	.71	44.7	42.1	.90	43.8	42.9	.36	42.9	44.3	.44	44.6	44.3	.13
Rew. S-L	34.3	33.6	.37	34.3	34.4	.03	34.5	34.6	.07	35.1	33.8	.64	35.4	33.7	1.00
Dem.	39.9	43.2	.83	42.7	41.9	.24	40.4	43.1	.89 <sup>T</sup>	45.9	39.6	1.62*	42.9	40.4	.72
Pun. D-O	22.4	23.8	.42	26.3	23.1	1.15	20.6	24.6	1.54 <sup>T</sup>	22.6	23.3	.19	22.1	24.0	.70
Lov.	60.5	60.8	.07	60.8	61.2	.14	64.3	60.8	1.33	60.4	61.1	.18	63.0	59.8	1.10
Neg.	22.9	20.9	1.11	23.8	21.7	.95	21.6	21.2	.22	21.8	23.8	.88	21.5	23.8	1.04
Rew. D-O	26.1	26.8	.24	29.8	27.9	.66	27.7	28.6	.36	27.6	27.7	.02	28.5	27.8	.25
FATHER															
Pro.	42.2	40.6	.50	39.6	43.0	1.06	40.8	41.3	.16	41.9	41.1	.25	41.6	42.1	.17
Pun. S-L	23.8	23.2	.17	22.9	23.6	.24	23.3	22.7	.24	24.5	22.3	.77	24.8	22.3	.83
Rej.	27.4	25.8	.41	28.1	27.3	.18	25.3	24.8	.15	28.8	24.4	1.06	29.8	26.4	.82
Cas.	43.6	45.2	.42	43.3	42.6	.19	45.4	41.8	1.15	44.1	44.0	.04	43.5	45.3	.45
Rew. S-L	31.3	30.9	.19	31.6	33.1	.67	32.5	32.0	.26	32.2	32.3	.05	31.6	32.1	.21
Dem.	44.1	42.6	.33	46.8	45.9	.20	43.5	44.8	.33	47.0	43.3	.85	47.1	42.4	1.02
Pun. D-O	21.8	19.6	.83	25.7	23.5	.76	20.5	23.1	.90	22.6	20.9	.56	23.5	21.6	.65
Lov.	56.4	58.8	.58	55.8	57.1	.31	59.8	58.3	.40	55.5	60.3	1.12 <sup>T</sup>	55.1	57.6	.54
Neg.	26.1	24.8	.45	28.1	24.3	1.21	24.6	24.1	.23	27.7	24.1	1.34	27.6	25.7	.61
Rew. D-O	25.8	26.8	.34	30.1	27.4	.83	28.9	27.6	.47	28.8	28.1	.18	28.0	27.5	.14
SES	3.1	3.1	--	3.4	3.4	--	2.9	3.4	1.21	3.6	2.9	1.69*	3.3	3.1	.41

Note: H.L. and L.L. refer to high and low levels of differentiation on test used  
N - refers to total number in both groups, i.e. 16 in H.L. and 16 in L.L.  
\* -  $p < .05$ ; \*\* -  $p < .01$ ; T -  $p < .10$ ; } one-tail tests except for SES  
SES - lower the number, the higher the SES





## 2. COLLEGE GROUPS

### A. Results: Analysis, Part A

Table V indicates the intercorrelations between each of the PCR categories and perceptual measures for the separate college boys and girls groups.

#### (1) College Boys: (N = 38)

For college boys, no statistically significant relationships are found between perceptions of parents and field independence in the rod-and-frame task. The only tendency noted is for casualness in the father to show a negative relationship to the rod-and-frame measure. This is not as predicted, but is consistent with a similar finding in the high school boys where low casualness in parents was found associated with higher capacity on the perceptual differentiation measures.

No relationships were found between college boys' PCR scores and the structuring task (C/Sp). A similar observation is made as respects PCR-Mother for these boys on the analytical perception task (Closure Flexibility). However, perception of father shows several relationships in the predicted direction on the analytical task. A positive relationship is found between symbolic-love reward and loving categories on the Father-form, and capacity for analytical perception (.05 and .01 levels of sig.). Moreover, as predicted, neglect by the father shows a negative relationship (.01 level) to performance on the analytical task. A tendency for the same picture to occur as regards the reject category is in the hypothesized direction. Inspection of the factor picture on the PCR



TABLE V - INTERCORRELATIONS AMONG PCR SCORES, SES, AND PERCEPTUAL DIFFERENTIATION MEASURES FOR COLLEGE GROUPS

PCR Categories	Girls (N = 31)					Boys (N = 38)				
Percep. of Mother	R/F	C/Sp	CFlx	Didx	SES	R/F	C/Sp	CFlx	Didx	SES
Prot. (+O)	-24	-01	15	-04	-17	-03	.12	-13	-02	11
Pun. S-L (-LR&CD-)	17	17	-19	07	02	-06	-13	-13	-16	-06
Rejecting (-LR)	25	19	-02	19	28	00	-21	-14	-18	-02
Casual (+CD)	-07 <sup>T</sup>	-04	13	01	-24	-07	-03	-20	-15	02
Rewarding S-L(+LR;O+)	-31	-47**	-17	-43*	-24	11	21	08	20	10
Demanding (-CD)	-02	09	-29	-10	22	-04	04	02	01	35*
Punishing (-CD)	02	-05	-24	-13 <sup>T</sup>	-01	-14	-11	-09	-17	12
Loving (+LR)	-28	-46**	-01	-34 <sup>T</sup>	-15	03	23	25	26	-04
Neglecting (-LR)	29	36*	00	30	09	09	-18	-12	-11	01
Reward. D-O (+O)	-24	03	-27	-22	-20	14	18	02	17	01
Percep. of Father										
Protect. (+O)	-11	13	-05	-01	-17	03	-01	19	11	06
Punish. S-L (-LR&CD-)	-21	-06	-05	-15	-01	-01	-04	-23 <sup>T</sup>	-14	-07
Rejecting (-LR)	13	05	25	20	19	-03 <sup>T</sup>	08	-31	-14	-05
Casual (+CD)	-01	-16	-06 <sup>T</sup>	-10	06	-29	-08	-01	-19	03
Reward. S-L (+LR;O+)	-13	13	-33	-15	-11	15	10	40*	33*	20
Demanding (-CD)	-15	14	05	02	-16	03	17	06	13	04
Punish. (-CD)	05	09	-29	-07 <sup>T</sup>	-07	07	06	-08	02	07
Loving (+LR)	-20	-13	-36*	-32 <sup>T</sup>	-14	07	02	42**	26	13
Neglecting (-LR)	16	03	30	22	14	-26	00	-43**	-35*	-08
Reward. D-O (+O)	-19	01	-37*	-25	-13	10	17	09	18	03
SES rating	-01	06	-23	08	---	16	-21	10	14	---

Note: - The decimals have been omitted.

- The letters in parenthesis designate the factors on which each of the PCR categories are reported to load most highly. The + or - signs indicate the directions of the loading.

\* - sig. at .05 level; \*\* - sig. at .01 level; T - sig. at .10 level and considered to represent a tendency.





Father-form for college boys suggests that the categories of symbolic-love reward and loving represent somewhat of a supportive-loving kind of protective relationship and raises speculation of this being similar to an observation made by Dyk and Witkin (1965, p. 49). The latter authors suggest evidence that more differentiated boys are more likely to portray fathers as supportive than are less differentiated boys. They also indicate findings that fathers of field-independent boys participated more actively with their sons in sports, trips, etc. and participated more in rearing their children.

Similar to the findings in other groups, the differentiation index adds nothing further to the above picture.

One might also observe that socioeconomic status shows a positive relationship to the PCR Mother demanding category. This relationship suggests that the higher the socioeconomic status rating of father's occupation, the more demanding the college boys perceive their mothers.

## (2) College Girls: (N = 31)

Inspection of Table V reveals no significant relationships between the college girls' perceptions of their parents and field independence in the rod-and-frame situation. This is similar to the finding respecting high school girls. In the college group, a tendency, however, is noted for a negative relationship to attain between symbolic-love reward on the mother scale and the field-independent measure. This is counter to the predicted relationship, and consistent with the picture with high school girls on the changing figure task. However, examination



of the factor picture for the college girls, reveals that the S-L reward category loads equally on the L-R Factor and O-Factor (.44 to .39) of the PCR Mother-form (with the high school girls it loaded highly in O-Factor only). This suggests a tendency for this scale to reflect a possible over-indulgent or protective quality for the college girls. If this were the case, the tendency for the S-L reward scale to negatively correlate with field-independence presents no serious difficulty for the hypothesized direction of relationship, and actually would support it.

The college group of girls was the only one in which PCR scores were found to significantly be related to the structuring aspect of perception as measured by the Closure Speed Test. These relationships were found on only the Mother-form. None are in the predicted direction. When the factor picture is examined in the college group, the above explanation of reversal to predicted direction seems improbable and somewhat tenuous. The picture for college girls is one in which perception of the mother as relatively high in loving and symbolic-love reward is associated with low ability to structure an incomplete stimulus pattern; (.01 level of sig.). Supporting this picture is the positive relationship of the neglect category to the closure speed scores (.05 level), wherein high ability on the structuring task is associated with seeing the mother as relatively high on neglect (neglect shows an  $r$  of  $-.81$  with the loving scale). It may be suggested that high loving behavior perceived in mother by the college girls may reflect an over-dependency on mother. This would





seem to manifest itself in a perceptual dependence on accepting a stimulus field as is, having not developed in oneself perceptual resources to restructure it.

As was found with the group of college boys, perception of the father is seen, from Table V, to be related to analytical perception (Closure Flexibility test.) No relationships with PCR Mother are observed with this measure. Also the negative correlations (sig. at .05 level) are in the hypothesized direction between seeing father as direct-object rewarding (the latter scale loads .77 on the O-Factor) and the college girls' capacity for analytical perception. This, however, is the only significant relationship in respects to this aspect of perceptual behavior, that is in the hypothesized direction for the older girls group. The reverse to predicted direction is found in the negative correlation between the loving category on the Father form and analytical perception (.05 level of sig.). A similar tendency on the symbolic-love reward category is not surprising when one examines the correlation between this scale and the D-O reward scale for father (.59 and sig.  $< .01$  level). No similar explanation can be offered for the PCR Father neglect category, which, consistent with the picture on structuring for the college girls, shows a positive relationship to a higher level of performance on the analytical task. These latter relationships and tendencies are counter to the hypothesized directions for the college girls. The relationships between PCR scores and the Differentiation Index add nothing further to the above picture. The suggested trend is for col-



lege girls to yield relationships between their perceptions of parents and perceptual differentiation measures that are counter to those predicted by the hypothesis.

B. Results: Analysis, Part B

(1) College Boys: High (N=13) vs. Low Levels (N=13)  
of Perceptual Differentiation

Table VI indicates the findings as respects the differences in PCR category means between the high and low level capacity college boys, in reference to their performance on the perceptual tasks. (High and low defined on bases of being in top and bottom one-third of the distribution of scores on separate perceptual differentiation measures.) With the exception of the protect category on the PCR-Father form, all significant differences are in the hypothesized directions. No differences between HL and LL college boys in their perceptions of parents are found in the rod-and-frame situation, although the HL boys tend to see father as more symbolic-love rewarding. This tendency is in line with the predictions by the hypothesis.

On the structuring task (Closure Speed) the HL college boys report mother as less rejecting and more loving than LL boys. They also tend to see her less punitive and neglecting, both tendencies supporting the loving and rejecting relationships. The tendency to see father as more direct-object rewarding is not surprising upon examination of the PCR category intercorrelations and factor picture for these college boys. As was indicated in the discussion under Part A of the analysis, this scale is associated with a "loving quality of protectiveness" in these boys, and correlates negatively with reject and





TABLE VI - DIFFERENCES BETWEEN MEANS ON PCR SCALES OF SUBJECTS AT HIGH AND LOW LEVELS OF PERCEPTUAL DIFFERENTIATION IN A GROUP OF COLLEGE BOYS

PCR Cate- gories of Perceptions MOTHER	Rod/Frame		Closure Speed		Closure Flex.		Diff. Index	
	$\bar{X}$ H.L.	(N = 26) L.L.	$\bar{X}$ H.L.	(N = 26) L.L.	$\bar{X}$ H.L.	(N = 26) L.L.	$\bar{X}$ H.L.	(N = 26) L.L.
Protecting, S-L	38.2	42.5	1.13	39.2	49	41.3	42.5	38.2
Punishing, S-L	25.1	24.5	.27	26.4	1.12	24.8	23.6	24.4
Rejecting	28.5	26.2	.64	29.9	2.23*	25.9	23.6	28.5
Casual	41.5	45.1	1.11	41.7	.36	42.5	41.2	45.1
Rewarding, S-L	35.2	33.2	.88	31.6	1.16	32.8	36.6	31.5
Demanding, D-O	43.5	42.9	.21	42.2	.27 <sup>T</sup>	43.4	44.4	41.3
Punishing, D-O	25.2	24.3	.28	24.8	1.31	23.4	23.2	23.6
Loving	59.9	59.6	.09	57.7	1.72*	58.0	62.3	57.2
Neglecting, D-O	26.4	22.2	1.17	24.3	1.39	21.9	21.3	23.9
Rewarding, D-O	27.2	24.2	1.07	23.5	1.06	24.5	28.3	22.5
FATHER								
Protecting, S-L	39.4	37.9	.43	37.2	.43	35.5	41.5	36.0
Punishing, S-L	24.2	23.9	.11	26.5	.81	25.1	23.5	23.9
Rejecting	29.2	29.4	.06	29.8	.05	31.0	27.4	29.2
Casual	41.4	44.8	1.02 <sup>T</sup>	41.0	.32	41.9	39.9	45.3
Rewarding, S-L	32.9	29.8	1.41	29.2	1.09	27.2	34.8	28.8
Demanding, D-O	45.5	44.4	.41	45.9	.43	46.0	48.1	44.0
Punishing, D-O	25.9	24.4	.56	25.2	.06	24.8	26.1	23.1
Loving	56.7	54.1	.99	52.5	.69	47.1	57.9	52.3
Neglecting, D-O	27.7	29.4	.66	28.5	.78 <sup>T</sup>	30.9	24.3	29.5
Rewarding, D-O	26.7	26.2	.14	22.7	1.45	23.9	28.6	23.1
SES rating	4.1	3.8	.74	3.9	.71	3.8	3.6	3.6

Note: H.L. and L.L. refer to high and low levels of differentiation on test used  
N - refers to total number in the groups, i.e. 13 in H.L. and 13 in L.L.  
\* -  $p < .05$ ; \*\* -  $p < .01$ ; <sup>T</sup> -  $p < .10$  one-tail tests except for SES  
SES - lower the number, the higher the SES



neglect on the Father-form.

As might have been expected from findings discussed in Part A of the analysis, significant differences between PCR categories in HL and LL boys on the analytical perception task are found on only the father scales. The HL boys on this task see father as more loving, more symbolic-love rewarding, less neglecting and tend to see him as less rejecting than the LL boys. These differences are as predicted by the hypothesis. They also see father as more protective which is counter to the predictions which were based on the PCR's reported factor loading picture. As has been indicated for the college boys, the protective factor in this group differs somewhat from that reported by the PCR authors. For the college group of boys in the present study, perceived protectiveness in the father appears more equated with a supportive rather than indulgent factor.

The differences occurring on the differentiation index add considerable support to the above findings. HL boys on this index, in comparison to LL college boys, perceive mother as less rejecting, more symbolic-love rewarding, and more loving. They also see her as more direct-object rewarding (interpreted as more supporting in regards to the college boys in view of intercorrelation and factor picture in this group.) The HL boys also, as predicted, perceive father as more symbolic-love rewarding, less neglecting, more protecting and direct-object rewarding (supportive). Taking into consideration these differences, and the factor loading and PCR intercorre-





lation patterns for the college boys, considerable support is offered in substantiation of the hypothesis as respects the college boys group. This indeed appears the case when it is observed that for the college boys the composite measure distinguished between the HL and LL boys on each of the component measures at highly significant levels, (the least  $P$  being  $< .007$ ).

(2) College Girls: High (N=11) vs. Low Levels (N=11)  
of Perceptual Differentiation

Table VII presents the findings for the comparison of mean PCR-category differences between high and low levels of perceptual differentiation in college girls. The overall picture, as indicated in discussing Part A of the analysis further reveals the contrast to college boys. On the rod-and-frame measure of field independence, it is observed that differences exist only on the PCR-Mother-form. The more field-independent girls perceive mother as more rejecting, more neglecting and less loving and symbolic-love rewarding. This is counter to the hypothesized directions of differences on these categories. The PCR category intercorrelations and factor loading picture as discussed under Part A of the analysis does not offer any substantial evidence that these scales show a different factor pattern than that reported by the PCR authors. Actually, the college girls were the most consistent of all groups in approximating a similar factor structure on the PCR-Mother-form to that reported by Roe and Siegelman.

One also observes from Table VII that the HL girls on the structuring task (Closure Speed) report mother as less loving than the LL college girls. They also see father as less



TABLE VII - DIFFERENCES BETWEEN MEANS ON PCR SCALES OF SUBJECTS AT HIGH AND LOW LEVELS OF PERCEPTUAL DIFFERENTIATION IN A GROUP OF COLLEGE GIRLS

PCR Categories	Perceptual Differentiation Measures							
	Rod/Frame		Closure Speed		Closure Flex.		Diff. Index	
Perceptions of MOTHER	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.
Protecting, S-L	39.4	39.6	38.0	40.2	40.2	38.4	39.3	38.1
Punishing, S-L	26.4	24.6	26.5	24.8	23.4	25.0	24.1	24.6
Rejecting, S-L	29.6	22.9	27.2	26.2	23.8	23.2	24.3	21.9
Casual, S-L	42.5	44.9	40.8	44.0	44.6	42.6	40.9	42.2
Rewarding, S-L	29.5	35.9	29.0	32.3	30.8	32.4	29.2	35.2
Demanding, D-O	42.5	40.2	41.8	40.5	37.5	41.5	39.2	40.4
Punishing, D-O	23.1	22.5	21.6	21.6	19.6	21.7	20.8	21.7
Loving, D-O	54.1	62.3	52.1	61.8	60.2	60.3	56.6	63.6
Neglecting, D-O	27.7	22.9	26.6	24.1	23.2	23.6	24.4	22.0
Rewarding, D-O	27.9	29.8	25.6	27.0	26.0	29.5	26.5	27.9
Perceptions of FATHER	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.	$\bar{X}$ H.L.	(N = 22) L.L.
Protecting, S-L	40.7	37.2	38.3	38.0	38.9	38.7	38.8	36.7
Punishing, S-L	20.6	23.5	19.6	22.7	21.6	20.8	19.1	22.0
Rejecting, S-L	25.6	25.4	27.6	27.4	27.9	22.7	25.6	24.0
Casual, S-L	43.8	41.7	41.0	47.7	43.6	44.1	38.3	41.6
Rewarding, S-L	34.6	33.9	31.6	32.1	30.0	35.2	32.0	33.1
Demanding, D-O	42.6	45.6	43.6	40.4	41.5	41.8	43.7	42.9
Punishing, D-O	21.3	23.6	21.3	19.1	17.6	21.6	19.3	22.0
Loving, D-O	54.4	57.2	52.7	56.9	50.6	59.6	52.4	58.6
Neglecting, D-O	29.6	27.8	29.7	29.0	30.6	25.0	29.6	25.9
Rewarding, D-O	26.9	26.9	24.4	25.5	23.5	28.5	23.8	25.9
SES rating	4.1	4.1	3.9	3.8	4.2	3.9	4.0	3.9

Note: H.L. and L.L. refer to high and low levels of differentiation on test used  
N - refers to total number in the groups, i.e. 11 in H.L. and 11 in L.L.  
\* -  $p < .05$ ; \*\* -  $p < .01$ ; T -  $p < .10$  ) one-tail tests except for SES  
SES - lower the number, the higher the SES





casual. The latter, however, is hardly a discrepant relationship with the prediction of the hypothesis when one notes that casualness on the PCR Father-form for the college girls is associated with neglect ( $r$  of  $+.49$ , sig.  $< .01$ ). This is a discrepancy with the PCR authors' findings with this scale and with their reported factor loadings for the casual category. It is noted in the present college girls group, casual loads relatively highly on the O-Factor ( $+.62$ ). Low casualness for these girls would seem to mean low indulgence or overprotectiveness or low neglect, thus in essence offering support to the hypothesis.

Evidence for a similar to the above explanation of reverse-to-predicted differences in the PCR categories of loving and neglect (sig. at  $.05$  level) on the PCR-Father-form for HL and LL girls, in reference to the analytical task (Closure Flexibility), however, is not forthcoming. The HL college girls see father as less loving and more neglecting, both bi-polar scales and showing high respective loadings of  $+.82$  and  $-.94$  on the Love-Reject Factor on the Father-form. They also tend to see father as more rejecting and less symbolic-love rewarding, scales with respective loadings of  $-.90$  and  $+.77$  on the L-R Factor on PCR-Father-form. The only support of the hypothesis for the college girls in respect to the analytical task is the tendency for the HL girls to see mother as less demanding, and father as less D-O punitive and less D-O rewarding.

The differences occurring in respect to the differ-



entiation index only support and add nothing further to the findings reported above.

### 3. ADDITIONAL ANALYSIS OF SEX DIFFERENCE IN REGARDS TO REVERSAL OF HYPOTHEZIZED DIRECTION OF RELATIONSHIPS

In view of the suggestion from the data that the girls groups seemed to reject the hypothesis by yielding opposite to predicted relationships, the writer felt it important to explore this trend further. The initial step in doing this was to construct a table from the findings of Part A of the analysis. This table indicates the relationships in the predicted and reverse to predicted directions for all four groups used in the study. In so doing, all coefficients greater than  $\pm .20$  between PCR categories and the separate perceptual measures were included (even those reaching a level of significance between .10 and .15.) One was looking for trends only, and it was felt that this arbitrary selection could be justified, in order to increase the number of observations. The tabulations in terms of relationships being in the predicted or reverse to predicted directions are reported in Table VIII.

Inspection of Table VIII reveals that of the 43 relationships which are in the predicted direction, ten reach significance at the .01 or .05 levels and 7 at the .10 level (two-tail tests). Of these 17 relationships, 13 are accounted for by boys groups and only 4 by the girls groups. As regards the reverse to predicted relationships, of which there are 22, six reached significance at the .01 or .05 levels, and 6 at the .10 level. However, of the latter 12 reverses, 10 are





TABLE VIII -- RELATIONSHIPS OBTAINED IN PREDICTED DIRECTIONS AND REVERSE TO PREDICTED DIRECTIONS BETWEEN PCR CATEGORIES AND INDIVIDUAL PERCEPTUAL DIFFERENTIATION MEASURES

PCR Scales and Related Factors	High School Girls (N = 46)		College Girls (N = 31)		High School Boys (N = 32)		College Boys (N = 38)	
Perceptions of: MOTHER	R/F	C/Fg C/Sp CFLx	R/F	C/Sp CFLx	R/F	C/Fg C/Sp CFLx	R/F	C/Sp CFLx
Loving (+LR)	-	PD	RD**	RD**	-	-	-	PD PD
S-L Reward. (+LR; O+)	-	RD <sup>T</sup>	RD <sup>T</sup>	RD**	-	-	-	PD
Casual (+CD)	-	-	-	RD**	-	RB	-	PD
Neglect (-LR)	-	-	-	-	-	-	-	-
Reject (-LR)	-	PD	RD	RD*	RD*	-	-	-
Demand (-CD)	-	-	RD	-	-	-	-	PD
S-L Punish. (-CD; LR-)	-	RD <sup>T</sup>	-	PD	-	-	-	-
D-O Punish. (-CD)	-	-	-	-	-	-	-	-
Protect. (+O)	-	PD*	PD	PD	-	-	-	-
D-O Reward. (+O)	-	PD <sup>T</sup>	PD	PD	PD <sup>T</sup>	PD	-	-
Note								
FATHER								
Loving (+LR)	-	-	RD*	RD*	PD	-	-	PD**
S-L Reward. (+LR; O+)	-	RD*	-	RD <sup>T</sup>	-	RD	-	PD*
Casual (+CD)	-	PD	-	-	-	PD	-	-
Neglect (-LR)	-	-	-	RD <sup>T</sup>	PD <sup>T</sup>	-	PD	PD*
Reject (-LR)	-	-	-	RD	PD	-	-	PD*
Demand (-CD)	-	-	-	-	-	-	-	-
S-L Punish. (-CD; LR-)	-	-	PD	-	-	RD	-	PD
D-O Punish. (-CD)	-	PD	-	PD	-	RD	-	-
Protective (+O)	-	PD*	-	-	-	PD	-	-
D-O Reward (+O)	-	PD	-	PD*	PD <sup>T</sup>	PD <sup>T</sup>	-	-

Note: The letters in parentheses designate the factors on which each of the PCR categories are reported to load most highly. The plus or minus sign indicates the direction of the loading.

PD - Designates a relationship in predicted direction, where "r" is  $> +.20$

RD - Designates a relationship in reverse to predicted direction, where "r" is  $> +.20$

\* - Designates a relationship found significant at .05 level; \*\* - sig. at .01 level.

T - Sig. at  $< .10$  level.



accounted for by girls and only 2 are accounted for by the boys groups. This picture seems to indicate that the girls groups were indeed yielding a contrasting picture and not supporting the hypothesized directions of relationship between perceptions of parents and perceptual differentiation. To statistically test these observations, 2 x 2 contingency tables were prepared and chi square tests were applied in determining significance levels for the differences observed. This was done in respect to combinations of all relationships at .01, .05 and .10 levels, and separately for these combined with all other relationships with an "r" greater than  $\pm .20$ . Several paired groups were similarly compared in an attempt to explore differences in the sex or age-grade level groups. Table IX below summarizes all of these comparisons.

Inspection of Table IX suggests that when the combined boys groups are compared with the combined girls groups on all relationships at .01, .05, and .10 levels of significance that a difference is found between these groups in terms of the frequency of occurrence of predicted vs. reverse to predicted directions. It would appear that boys support hypothesized correlations and girls yield support counter to the hypothesized directions. When all relationships (with r greater than  $\pm .20$  are combined) the trend is similar. It is noted, however, that the college girls for the most part tend to account for the reverse picture for girls. This group shows a difference from both the college and high school boys groups as well as a tendency to also differ from the high school girls.





TABLE IX - SIMILARITIES AND DIFFERENCES BETWEEN PREDICTED AND REVERSE TO PREDICTED RELATIONSHIPS IN DIFFERENT SEX AND GRADE LEVELS

Paired Groups Compared	Relationships Significant			All Significant Relations-		
	.01, P.D.	.05 and R.D.	10 or $\chi^2$ P	ships and P.D.	Tendencies R.D.	$\chi^2$ P
Combined Boys Groups Combined Girls Groups	13 4	2 10	10.07 (7.82) 10 4	26 17	8 14	3.39 3.39 10 4 .06
High School Boys High School Girls	9 3	1 3	2.94 (1.42) 10 3	16 9	7 3	<1.00 10 3 NS
College Boys College Girls	4 1	1 7	5.92 (3.41) 10 1	10 8	1 11	6.91 (5.03) 10 8 <.01 <.05
High School Boys College Girls	9 1	1 7	10.81 (7.90) 10 1	15 8	3 11	6.68 (5.04) 15 8 <.01 <.05
High School Boys College Boys	9 4	1 1	(.02) 10 4	15 10	3 1	<.50 15 10 NS
High School Girls College Boys	0 4	1 1	(.15) 10 4	3 10	1 1	<1.00 3 10 NS
High School Girls College Girls	0 1	1 7	(1.74) (.20 to .10) 10 1	3 8	1 11	2.06 (.20 to .10) 3 8 (.20 to .10)

Note: PD-refers to relationships in predicted directions for all of the perceptual differentiation measures. In comparing college with high school groups, relationships on the Changing Figure Task were not included as results from this were not able to be used for the college groups.

RD - refers to relationships in reverse to predicted directions for all the perceptual differentiation measures. Changing Figure Task was not used in comparing college and high school groups.

-Bracketed numerals pertain to Yates correction.



No differences of note are found between the boys groups and there is only a slight tendency for the high school boys and girls to differ.

A word of caution is in order in the interpretation of the  $\chi^2$  significance levels that are indicated in Table IX. This is necessary when one notes that the observations in the cells are not independent in the same sense as the usual frequencies that appear in contingency tables. Rather, they represent frequencies of correlations in predicted and reverse directions. When the possibility is noted that PCR subscales accounting for the correlations may themselves be related, the use of  $\chi^2$  in the present context may well yield spurious differences. The picture which emerges, however, is in keeping with the sex differences which appear upon further data analysis, and would seem to offer support to the findings reported in Table IX.

Although most of the findings discrepant with the hypothesized directions might be explained for the boys groups and the high school girls by the discrepancies in the PCR loadings for these groups in contrast to those reported by the PCR authors, this was not found to be the case with the college girls. The overall findings are summarized and discussed further in Chapter V. Conclusions are also stated as respects the tenability of the hypothesis and implications for further research are suggested.





## CHAPTER FIVE

### SUMMARY OF FINDINGS, DISCUSSION AND CONCLUSIONS

#### 1. GENERAL APPROACH TO SUMMARY OF FINDINGS

The hypothesis guiding the present study is that perception of one's parents as loving, symbolic-love rewarding and casual would be found to be positively related to perceptual differentiation measures; whilst seeing parents as rejecting, neglecting, demanding, symbolic-love punishing, protective and direct-object rewarding would be found to be negatively related to the same perceptual measures. Two approaches were used in the testing of the hypothesis: (A) Correlational (B) Comparison of mean differences on PCR scales (the PCR was the parent-child relationship questionnaire used to assess perceptions of parents) of subjects falling at the top and bottom one-third of the distribution of scores on the perceptual differentiation measures. Part B was included in the analysis to permit a double check on relationships that might turn up in Part A, and to more clearly bring these relationships to the fore if they were indicated.

In formulating the predictions in the hypothesis as respects the specific parent-perception categories, the findings reported by the authors of the PCR (1963) served as a guide. These authors, (Roe and Siegelman, 1963), found the ten subscales of the PCR to load on three factors, which they designated as Love-Reject, (L-R), Casual-Demand (C-D) and Overt-attention (O). The hypothesis of the present investigation predicted that those PCR scales which loaded positively on the L-R and C-D Factors,



would be positively related to the perceptual differentiation measures; and that those scales with negative loadings on the L-R and C-D Factors, and positive loadings on the O-Factor would be negatively related to the perceptual differentiation measures. Realizing the possibility that the groups of subjects used in the present study might well show a different factor-loading picture on some PCR scales than those reported by the PCR authors, a factor analysis similar in procedure to that employed by Roe and Siegelman (Principle Components Method with subsequent varimax rotation) was done for each group. (High school boys, high school girls, college boys, college girls. See Appendix B, Tables I and II.) This proved to be highly important in more accurately interpreting the results obtained with several of the PCR subscales. Although there were no serious discrepancies in the overall factor picture with that obtained by the PCR authors, without the guidance of the factor analysis for each group in the present study, several erroneous conclusions would have occurred. In view of this phenomenon in the data and to more accurately appraise the tenability of the hypothesis, it is important to summarize the findings with consideration of the specific factor structure of the PCR for each separate group of subjects used in the study. Also, in view of the complexity of the data, some means was felt necessary by which the findings could be summarized in a more simplified and meaningful way.

In an effort to accomplish both a summary of the obtained factor picture for different groups, and a summary of findings from the data respecting both parts A and B of the an-





alysis, Tables X to XV were prepared. Tables X and XI contain a summary of findings as respects each PCR subscale factor loading for each group for both Mother and Father-forms. Also indicated in these tables is the direction of the differences in mean PCR scores for subjects who performed at a relatively high level on each of the perceptual differentiation measures. The latter information is based on the findings from comparing groups high and low on these measures, in Part B of the analysis. When the direction was found to be supported from findings coming from the testing of Part A of the analysis, a bracket is placed around the lower (Lo) or higher (Hi) specified direction. When differences did not come out in the comparison, but were found in the intercorrelation matrix for the total group concerned, a large R with a + or - sign to indicate direction of the relationship is indicated. Relationships and any differences in socioeconomic status are also indicated on Tables X and XI.

Tables XII to XV summarize information from the preceding two tables. This is done in terms of PCR factors as related to high and low levels of performance on the separate perceptual differentiation measures. The summary by factors reduces the major number of PCR variables per group from twenty to six, and simplifies the drawing of conclusions in respect to the hypothesis. However, in order not to lose sight of the specific PCR components involved in the factor concerned, each subscale associated with the factor is indicated in brackets. If the specific PCR subscale did not show a significant relationship ( $< .01$  or  $.05$  level) with the perceptual measure in-



TABLE X - SUMMARY OF THE DIRECTION OF DIFFERENCES IN PERCEPTIONS OF PARENTS BY HIGH SCHOOL BOYS AND GIRLS WHO PERFORMED AT HIGH LEVELS ON THE PERCEPTUAL TASKS

Obtained Factors for PCR Scales		Field Ind. on R/F Test		Flex. on C/ Fg Task		High Struc. on C/Sp Test		High Analy. on CFLx Test		High Diff. Index		"r" SES&PCR total groups	
Boys		MOTHER		Boys		Girls		Boys		Girls		Boys	
		Girls		H.L		H.L		H.L		H.L		H.L	
O+	Prot.	+O	Lwr <sup>T</sup>	-	-R*	-	-	-	-	-	-	-	-R <sup>T</sup>
CD-	S-L Punish	-LR	-	-	-	-	-	(Lwr**)	-	-	-	-	-R
LR-	Reject	-LR	-	-	-	-	-	-	-	-	-	-	-
CD+	Casual	+CD	(Lwr*)	-	-	-	-	-	-	-	-	-	-R*
O+	S-L Reward	+O	-	-	-R*	-	-	-	-	-	-	-	-R <sup>T</sup>
CD-	Demand.	-CD; LR-	-	-	-	-	-	-	-	-	-	-	-R
CD-	D-O Pun.	-CD; LR-	-	-	-	-	(Lwr <sup>T</sup> )	-	-	-	-	-	-
+O; LR+	Loving	+LR	Hgr*	-	-	-	(Hgr <sup>T</sup> )	-	-	-	-	-	-
LR-	Neglect.	-LR	(Lwr*)	-	-	-	-	-	-	-	-	-	-
O+	D-O Reward	+O	-R <sup>T</sup>	-	-R <sup>T</sup>	-	(Lwr*)	-	-	-	-	-	-
FATHER													
O+	Protect	+O	-	-	-R*	-	-	-	-	-	-	-	-R <sup>T</sup>
CD-	S-L Pun.	-CD; LR-	-	-	-	-	-	-	-	-	-	-	-R
LR-	Reject	-LR	-	-	-	-	-	-	-	-	-	-	-R**
CD+	Casual	+CD	(Lwr*)	-	-	-	-	-	-	-	-	-	-
O+	S-L Reward	+O	-	-	-R**	-	(Lwr <sup>T</sup> )	-	-	-	-	-	-R**
CD-	Demanding	-CD	Hgr*	-	-	-	-	-	-	-	-	-	-R**
CD-	D-O Punish.	-CD	-	-	-	-	-	-	-	-	-	-	-R**
+LR	Loving	+LR	(Hgr*)	-	-	-	-	-	-	-	-	-	+R
LR-	Neglect.	-LR	(Lwr*)	-	-	-	-	-	-	-	-	-	-
O+	D-O Rew.	+O	-	-	-	-	(Lwr*)	-	-	-	-	-	-
SES													
				(Hgr**)				(Hgr*)		(Hgr <sup>T</sup> )			

Note: T - refers to tendency for a sig. diff. to occur (<.10 level).

\* - significantly lower or higher than subjects with low capacity in their performance on the perceptual tasks at  $\bar{Z}$  .05 level; \*\* - sig. difference at .01 level.

R - indicates that although no diff. is found in comparing extreme groups, a rel. was found for total groups in intercorrelations (Tbl. II). Sign indicates direction and T a tendency.

Brackets around (Lwr.) or (Hgr.) indicates additional support for the diff. from findings in Part A of analysis when r is at least +.20, or as in most cases significant at .01 or .05 levels.





TABLE XI - SUMMARY OF THE DIRECTION OF DIFFERENCES IN PERCEPTIONS OF PARENTS BY COLLEGE BOYS & GIRLS WHO PERFORMED AT HIGH LEVELS ON THE PERCEPTUAL TASKS

Obtained Factors for PCR Scales		Field Indpnt. on R/F Test		High Struct. on C/Sp Test		High Analyt. on C/Flx Test		High Diff. Index		SES	
Boys	MOTHER	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
		H.L	H.L	H.L	H.L	H.L	H.L	H.L	H.L	H.L	H.L
O+	Protect	-	-	-	-	-	-	Hgr <sup>T</sup>	-	-	-
LR-	S-L Punish	-	-	-	-	-	-	-	-	-	-
LR-	Reject	-	(Hgr*)	-	-	-	-	Lwr <sup>T</sup>	-	-	-
CD+	Casual	-	-	-	-	-	-	Lwr <sup>T</sup>	-	-	-
O+	S-L Reward.	-	(Lwr**)	-	-R**	-	-	(Hgr*)	(Lwr*)	-	-
CD-	Demanding	-	-	-	-	-	-	-	-	+R*	-
CD-	D-O Punish	-	-	Lwr <sup>T</sup>	-	-	-	-	-	-	-
+O;LR+	Loving	-	(Lwr**)	(Hgr*)	(Lwr*)	(Hgr <sup>T</sup> )	-	(Hgr*)	(Lwr*)	-	-
LR-	Neglect.	-	(Hgr**)	Lwr <sup>T</sup>	+R*	-	-	Lwr <sup>T</sup>	+R <sup>T</sup>	-	-
O+	D-O Reward	-	-	-	-	-	-	Hgr*	-	-	-
FATHER											
O+	Protect	-	-	-	-	Hgr*	-	Hgr*	-	-	-
LR-	S-L Punish	-	-	-	-	(Lwr <sup>T</sup> )	(Hgr <sup>T</sup> )	-	Lwr <sup>T</sup>	-	-
LR-	Reject	-	-	-	-	-	-	-	-	-	-
CD+	Casual	-R <sup>T</sup>	-	-	-	(Hgr**) (Lwr <sup>T</sup> )	-	Lwr <sup>T</sup>	-	-	-
O+	S-L Reward	Hgr <sup>T</sup>	-	-	-	(Hgr**) (Lwr <sup>T</sup> )	-	(Hgr**) (Lwr*)	-	-	-
CD-	Demanding	-	-	-	-	-	-	-	-	-	-
CD-	D-O Punish	-	-	-	-	(Hgr**) (Lwr <sup>T</sup> )	-	-	-	-	-
+O;LR+	Loving	-	-	-	-	(Hgr**) (Lwr*)	(Lwr <sup>T</sup> )	Hgr <sup>T</sup>	(Lwr*)	-	-
LR-	Neglect.	-	-	-	-	(Lwr**) (Hgr*)	(Hgr*)	(Lwr**) (Hgr*)	-	-	-
O+	D-O Reward	-	-	Hgr <sup>T</sup>	-	-	-	Hgr*	-	-	-
SES											
		-	-	-	-	-	-	-	-	-	-

Note: T - refers to tendency for a sig. difference to occur (<.10 level)

\* - significantly lower or higher than subjects with low capacity in their performance on the perceptual tasks at  $\bar{Z}$  .05 level. \*\* - sig. difference at .01 level.

R - indicates that although no difference was found in comparing the extreme groups, a relationship was found for the total group (See Tbl.III). The sign indicates direction and T indicates a tendency.

Brackets around (Lwr) or (Hgr) indicates additional support for the diff. from findings in testing Part A of analysis when r is at least  $\pm .20$ , or as in most cases sig. at .01 or .05 levels.



volved, but did so at  $\bar{Z}$  .10 level, this is indicated by the superscript "T" to indicate a tendency. The use of the factors, in drawing conclusions regarding the tenability of the hypothesis, is justified in view of the fact that the predicted directions for specific PCR subscales were initially based on the factor structure of the PCR. If factor loadings for some scales in the groups used in the present study are discrepant with those reported by the PCR authors, the resultant problem created by such scales is also remedied by use of the factors in the summary of findings and conclusions.

By comparing Table X & XI with Tables II and V, the general discrepancies with PCR reported factor loadings for each group used in the present study can be roughly observed. (For specific discrepancies in actual size of loadings, see Roe & Siegelman, 1963). For high school boys, discrepancies are noted on the S-L Punish, S-L Reward and Loving scales for PCR-Mother. Whereas the reported negative loading for the S-L Punish scale is highest on the L-R Factor, for the high school boys it is now on the C-D Factor; whereas the S-L Reward was reported to load highest positive on L-R Factor, it now loads most highly on the O-Factor, as is similarly the case with the "loving" scale. This is also the case for the S-L Reward scale in the Father-form for the high school boys, and for both the Mother and Father-form for the high school girls, and college boys. In the college boys, the loving scale on both PCR-Mother and Father also load most highly positive on the O-Factor. There are no discrepancies with reported loadings on the Mother-form





for college girls. However, the Father-form for college girls presents a different picture, in that casual now positively loads most highly and second most highly respectively on the O-Factor and negatively on the L-R Factor.

## 2. SUMMARY OF PCR-FACTORS AS RELATED TO PERCEPTUAL DIFFERENTIATION MEASURES

### A. Love-Reject Factor:

#### 1) High School Boys:

As indicated in Table XII, in the high school boys group, this factor shows a relationship to field-independency as measured in the rod-and-frame situation. On both PCR-Mother and Father-forms, perceiving parents as higher in loving and lower in neglecting is associated with increased field-independence as indicative of a higher level of perceptual differentiation. The tendencies suggest, however, that this may not be the case for other perceptual behavior. Seeing father as more rejecting, less loving and more neglecting tends to be associated respectively with higher flexibility on the changing figure task and analytical perception on the closure flexibility task.

#### 2) High School Girls:

Table XIII indicates no relationships were found in the high school girls group between the L-R Factor and the perceptual measures. Two tendencies only are observed. One of these is that perceiving higher loving and lower D-O Punishing in mother tends to be related to increased structuring capacity on the Closure Speed Test. The other is the tendency for high neglect in father to be associated with higher analytical perception on the Closure Flexibility measure.



TABLE XII - SUMMARY OF PCR FACTORS AND PERFORMANCE ON PERCEPTUAL DIFFERENTIATION MEASURES  
IN A GROUP OF HIGH SCHOOL BOYS

Perceptual Measures	Love-Reject Factor Mother - PCR Father - PCR (+Lov.) (-Neg.) (+Lov.) (-Neg.)	Casual-Demand Factor Mother-PCR Father-PCR (+Cas.) (-Cas.) (-Dem.)	Overt-Attention Factor Mother-PCR Father-PCR (+Lov.) (-Lov.)
Fld. Ind. on R/F Higher Lower	- (+Lov.) (-Neg.) (+Lov.) (-Neg.)	- (+Cas.) (-Cas.) (-Dem.)	- (+Lov.) (-Lov.)
Flx. on Ch. Fig. Higher Lower	- (-Rej.) <sup>T</sup>	- (+Cas.) <sup>T</sup> (-S-L Pun.) (-D-O Pun.)	- (+D-O Rew.) <sup>T</sup>
Str. on Cl.Sp. Higher Lower	- (-Rej.) <sup>T</sup>	- (+Cas.) <sup>T</sup> (-S-L Pun.) (-D-O Pun.)	- (+D-O Rew.) <sup>T</sup>
Anal. on Cl. Flx. Higher Lower	- (+Lov.) <sup>T</sup> (-Neg.) <sup>T</sup>	- (-S-L Pun.) (-D-O Pun.) (-S-L Pun.) <sup>T</sup>	- (+D-O Rew.) (-D-O Rew.)
Diff. Index Higher Lower	- (-Neg.)	- (-Dem.)	- (+D-O Rew.) <sup>T</sup> (+S-L Rew.)

Note: Bracket indicates the PCR category showing a relationship or mean difference in respect to the perceptual measure. The + or - sign indicates the direction of loading on the Factor. T - indicates a tendency for significance in the relationship or difference in PCR categories in respect to the perceptual measure (< than .10 but not reaching .05 level). All other "r"s or Diff. are sig. at .01 or .05 levels.





TABLE XIII - SUMMARY OF PCR FACTORS AND PERFORMANCE ON PERCEPTUAL DIFFERENTIATION MEASURES IN A GROUP OF HIGH SCHOOL GIRLS

Perceptual Measures	Love-Reject Factor		Casual-Demand Factor		Overt-Concern Factor	
	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR
Fld. Ind. on R/F Higher Lower	-	-	-	-	-	-
Flx. on Ch. Fig. Higher Lower	-	-	-	-	-	-
Str. on Cl.Sp. Higher Lower	(+Lov.) <sup>T</sup> Pun.) <sup>T</sup>	(-P-O Pun.) <sup>T</sup>	(-D-O Pun.) <sup>T</sup>	-	(+Pro.) (+S-L (+Pro.) Rew.) (+D-O (+S-L Rew.) Rew.) <sup>T</sup>	-
Anal. on Cl. Flex. Higher Lower	-	(-Neg.) <sup>T</sup>	-	-	-	-
Diff. Index. Higher Lower	-	-	-	-	-	-

Note: Bracket indicates the PCR category showing a relationship or mean difference in respect to the perceptual measure. The + or - sign indicates the direction of loading on the Factor. T - indicates a tendency for significance in the relationship or difference in PCR categories in respect to the perceptual measure ( < than .10 but not reaching .05 level.) All other "r"s or differences are sig. at .01 or .05 levels.



### 3) College Boys :

As observed in Table XIV, the Love-Reject Factor shows relationships to the perceptual differentiation measures in the college boys group. Higher love and lower rejection along with a tendency for low neglect (all on the Mother-form) are associated with higher structuring capacity and higher scores on the differentiation index. Higher analytical perception, and higher scores on the index are associated with perceiving father as more loving, less neglecting and less rejecting (a tendency in the latter scale). A tendency to see mother as higher in loving also is associated with higher analytical perception in the college boys.

### 4) College Girls:

The college girls, as noted from Table XV, also show relationships on the L-R Factor to the perceptual differentiation measures, but quite in contrast to the college boys. On the PCR Mother-form, higher love and lower neglect and reject on several of the scales, are associated with field-dependence, lower structuring capacity and lower scores on the differentiation index. The same picture is found as respects the index, and analytical perception on the PCR Father-form.

## B. Casual-Demand Factor

### 1) High School Boys:

Table XII reveals that in the group of high school boys that perceiving high casualness and low demanding behavior on both the Father and Mother-form of the PCR was associated with lower field-independence on the rod-and-frame. However, when the casual factor is defined by low punitiveness in both father





TABLE XIV - SUMMARY OF PCR FACTORS AND PERFORMANCE ON PERCEPTUAL DIFFERENTIATION MEASURES IN A GROUP OF COLLEGE BOYS

Perceptual Measures	Love-Reject Factor		Casual-Demand Factor		Overt-Concern Factor	
	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR
Fld. Ind. on R/F Higher Lower	-	-	-	-	-	(+S-L Rev.) <sup>T</sup>
	-	-	-	(+Cas.) <sup>T</sup>	-	-
Struc. on Cl.Sp. Higher Lower	(+Lov.) <sup>T</sup> (-Neg.) <sup>T</sup>	(-Rej.) <sup>T</sup>	(-D-O Pun.) <sup>T</sup>	-	(+Lov.) <sup>T</sup>	(+D-O Rev.) <sup>T</sup>
	-	-	-	-	-	-
Analyt. on Cl. Flex. Higher Lower	(+Lov.) <sup>T</sup>	(+Lov.) <sup>T</sup> (-Neg.) <sup>T</sup>	-	-	(+Lov.) <sup>T</sup>	(+Lov.) <sup>T</sup> (+S-L Rev.) <sup>T</sup> (+Pro.) <sup>T</sup>
	-	-	-	-	-	-
Diff. Index Higher Lower	(+Lov.) <sup>T</sup> (-Neg.) <sup>T</sup>	(-Rej.) <sup>T</sup> (-Neg.) <sup>T</sup> (+Lov.) <sup>T</sup>	-	-	(+Lov.) <sup>T</sup> L Rev.) <sup>T</sup> O Rev.) <sup>T</sup>	(+S-L Rev.) <sup>T</sup> (+D-Pro.) <sup>T</sup> (+Lov.) <sup>T</sup>
	-	-	(+Cas.) <sup>T</sup>	(+Cas.) <sup>T</sup>	-	-

Note: Bracket indicates the PCR category showing a relationship or mean difference in respect to the perceptual measure. The + or - sign indicates the direction of loading on the Factor. T - indicates a tendency for significance in the relationship or difference in PCR categories in respect to the perceptual measure ( < than .10 but not reaching .05 level.) All other "r"s or differences sig. at .01 or .05 levels.



TABLE XV - SUMMARY OF PCR FACTORS AND PERFORMANCE ON PERCEPTUAL DIFFERENTIATION MEASURES IN A GROUP OF COLLEGE GIRLS

Perceptual Measures	Love-Reject Factor		Casual-Demand Factor		Overt-Concern Factor	
	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR	Mother-PCR	Father-PCR
Fld. Ind. on R/F Higher Lower	-	-	-	-	-	-
	(+Lov.) (-Rej.)	(+S-L Rew.) (-Neg.)	-	-	-	-
Struc. on Cl. Sp. Higher Lower	-	-	-	(-S-L Pun.) <sup>T</sup>	-	-
	(+Lov.) (-Neg.)	(+S-L Rew.) (-Neg.)	-	-	-	(+Cas.)
Analyt. on Cl. Flex. Higher Lower	-	-	(-Dem.) <sup>T</sup>	(-S-L Pun.) <sup>T</sup>	-	-
	-	(+Lov.) (-Neg.) (+S-L Rew.) (-Rej.) <sup>T</sup>	-	-	-	(+D-O Rew.) <sup>T</sup>
Diff. Index Higher Lower	-	-	-	(-D-O Pun) <sup>T</sup>	-	-
	(+Lov.) (-Neg.)	(+S-L <sub>T</sub> (+Lov.) Rew.) (-Neg.) <sup>T</sup>	-	-	-	-

Note: Bracket indicates the PCR category showing a relationship or mean difference in respect to the perceptual measure. The + or - sign indicates the direction of loading on the Factor. T - indicates a tendency for significance in the relationship or difference in PCR categories in respect to the perceptual measure ( < than .10 but not reaching .05 level). All other "r"s and differences sig. at .01 or .05 levels.





and mother, then high casualness in parents becomes associated with increased capacity for analytical perception, on the Closure Flexibility measure. However, low punitiveness in father as well as a tendency for high casualness was found to be associated with lower flexibility on the changing figure task. Similarly, low demand by father was found to be associated with low scores on the differentiation index for the high school boys.

(2) High School Girls:

As on the L-R Factor, Table XIII indicates that the high school girls showed no significant relationships on the C-D Factor between their perceptions of parents and the perceptual measures. Perceiving lower punitiveness in the mother tended however, to be related to higher ability on the structuring task. On the other hand, lower demand by mother tended to be associated with lower analytical functioning on the Closure Flexibility Test.

(3) College Boys:

Similar to the high school girls, as is seen in Table XIV, college boys showed no significant relationships on scales for the C-D Factor and perceptual functioning. Low punitiveness in the mother tended, however, to be associated with higher structuring, the same as in high school girls. Also high casualness in mother and father tended to be related to lower scores on the differentiation index, and tended on the Father-form to be associated with field-dependency in the rod-and-frame situation.



#### (4) College Girls:

As in the preceding three groups, tendencies only were found (see Table XV) for the scales loading on the C-D Factor. Perceiving the mother as low in demand tended to be associated with higher functioning on the analytical task. Perceiving the father as low in punitiveness tended to be related to higher structuring and analytical capacity, as well as higher differentiation index scores.

#### C. The Overt-Concern Factor:

##### (1) High School Boys:

Several relationships between this factor and performance on the perceptual tasks are revealed in Table XII. With minor exceptions, high protectiveness perceived in parents' behavior is found to be associated with lower levels of functioning on several of the perceptual measures. Higher D-O rewarding perceived by the high school boys on both PCR-Mother and Father-forms is found associated with lower capacity at structuring, on analytical functioning and with lower scores on the differentiation index. A tendency is also noted for perception of the mother as protecting and D-O rewarding to be related to field-dependence in the rod-and-frame situation. A tendency is also seen for high protectiveness in father to be associated with lower flexibility on the changing figure task. When the loving scale for mother, however, loads on the O-Factor, one sees that protectiveness is associated with field independence. It would appear that this is indicative of a supportive type of protectiveness, similar to that reported by Dyk & Witkin (1965) to be related to field independence.





A tendency is further noted for high direct-object reward to be associated with a higher level of flexibility on the changing figure task.

(2) High School Girls:

The O-Factor is the only one on which significant relationships of PCR scores and perceptual measures were found for the high school girls. High protectiveness on the PCR scales on symbolic-love reward and D-O reward (the latter scale a tendency only) which load on the O-Factor were found to be associated with lower flexibility on the changing figure task.

(3) College Boys:

For the college boys group, PCR scales loading on the O-Factor were found to be associated in both parents with a higher level of structuring, a higher level of analytical functioning in perception, and higher scores on the differentiation index. A tendency was also noted for higher symbolic-love reward on PCR-Father to be associated with field independence in the rod-and-frame situation. Taking into consideration the scales of loving and S-L reward that load highly on the O-Factor for the College boys, it seems doubtful whether the factor can be interpreted as an indulgent or over-protective dimension of parent-child behavior for the college boys. It would more likely appear to be similar to what Dyk and Witkin call a "supportive type" of parent-child interaction.

(4) College Girls:

The O-Factor contributed little to the findings as



respects the college girls' perceptions of parents in relation to their functioning on the perceptual differentiation measures. The only finding was that casualness, which showed a high loading on this factor for the college girls on the PCR Father-form, was found to be associated with lower capacity on the structuring task (C/Sp.) A tendency was also noted for high D-O reward in the father to be associated with lower analytical perception. Since the casual scale also shows a relatively high ( $-.56$ ) negative loading on the PCR Father L-R Factor, this tendency supports the picture of low loving and high neglect perceived in parents by the college girls to be associated with a high level of functioning on several other perceptual tasks.

### 3. GENERAL SUMMARY OF FINDINGS FOR ALL GROUPS AS RELATED TO THE HYPOTHESIS.

#### A. The L-R Factor:

Those PCR scales highly loading on this factor, which were found to be significantly related to perceptual differentiation measures in the college boys group (Loving, Rejecting, Neglecting) supported the hypothesis. Higher loving perceived in mother's behavior was found associated with a higher level of perceptual differentiation on the structuring task and on the differentiation index, with a tendency for the same to occur in regards to analytical perception on the Closure Flexibility Test. Higher loving perceived in father also was found to be significantly related to a higher level of analytical functioning in perception and a higher differentiation index, for the college boys. High school boys gave





support to the hypothesis on only the rod-and-frame field independence measure, in that the more field-independent boys saw both parents as more loving and less neglecting. Tendencies for the high school boys to yield counter to predicted relationship on the L-R Factor were noted on the PCR Father-form, on the changing figure and analytical tasks. Neither high school or college girls gave any real support to the hypothesis as regards the L-R Factor. The high school girls showed a tendency to support the hypothesis on the PCR Mother-form in relation to the structuring task, but like the high school boys, tended to offer a counter to predicted relationships on the PCR Father-form as regards analytical perception. The college girls yielded only relationships and differences that were completely contrary to those hypothesized. Their perceptions of mother as being low in loving and high in neglecting and rejecting was found to be associated with field independence and structuring capacity. The picture was similar to their perception of father in regards to analytical perception on the Closure Flexibility Test. In the latter instance, the tendencies noted in the high school boys and girls, shows up at a statistically acceptable level of significance in the college girls.

#### B. The C-D Factor:

There was no statistically acceptable support for the hypothesis on the C-D Factor PCR scales for any group. When relationships were found, they failed to reach an acceptable level of significance, and could be spoken of only as tendencies. For high school girls, a tendency was found for perceiv-



ing low punitiveness in mother to be associated with higher structuring capacity. The same was the case for college boys. In the college girls group, tendencies were found for low demand in the mother and low punitiveness in father associated with higher analytical perception. Lower punitiveness in father tended also to be related to higher structuring capacity. Contrary to the hypothesized direction, high school boys who saw both parents as high on the Casual-Demand Factor showed greater field dependence on the rod-and-frame, and performed at a higher level in the changing figure task and differentiation index if they saw father as more punitive. However, the high school boys supported the hypothesis on the punitive scales for both parents in respect to the analytical perception task. A tendency for the high school girls who performed at a lower level on the analytical task, to see mother as low in demand was also noted. College boys yielded a similar picture as revealed by their tendency for high casualness in both parents to be associated with a low differentiation index, and for high casualness in father to be associated with field dependence on the rod-and-frame. The latter is, however, readily explained when it is noted that for the college boys, high casualness was found equated with low loving.

### C. The O-Factor:

All groups yielded support for the hypothesis on the Overt-concern Factor. This, however, does not appear to be the case for college boys, except upon inspection of the PCR scales which load highly on this factor. For the college boys, the O-Factor is more plausibly interpreted as a loving type





of protectiveness apparently of a supportive kind, and the relationship of the factor scales to the perceptual measures adds considerable support to those found with the L-R Factor. In view of the factor picture, the relationships of the O-Factor scales to the perceptual measures in the college boys is interpreted as offering support to the hypothesis, for both parents as respects the differentiation index, for mother on structuring, and father on analytical perception. A tendency for perceptions of father as S-L rewarding is also noted to be associated with field independence, and for perceptions of mother as loving to be associated with analytical functioning. High school boys also offer considerable support to the hypothesis on this factor for both mother and father in respect to structuring, analytical perception and the index. Tendencies are also noted in this group for perceptions of mother as protective to be associated with field dependence, and father as protective to be associated with lower analytical perception and lower flexibility on the changing figure task. However, it is also observed, as in the college boys, on the L-R Factor, that perceptions of mother as loving is associated with greater field independence on the rod-and-frame. The picture for high school girls also supports the hypothesis as respects perception of both parents and performance on the changing figure task. Similarly, the college girls support the hypothesis on the PCR Father-form on the structuring task and tend in the same direction on this form as regards analytical perception.

A chart-form summary of the overall support and counter-



support of the hypothesis is provided in Table XVI below for the various groups. This table indicates (taking into consideration the qualifications discussed above, and the statistically significant relationships and differences which were found) that the high school boys support the hypothesis on the PCR scales loading on the L-R Factor and the O-Factor and except for support offered in reference to the Closure Flexibility task, yield results counter to those hypothesized on the C-D Factor. It is also revealed that college boys offered considerable support to the hypothesis on the L-R Factor scales, and the O-Factor which for these boys seems equated with the L-R Factor. High school girls provided support to the hypothesis on only the O-Factor in reference to the changing figure, as did college girls on the structuring task. Relationships and differences found in the college girls on the L-R Factor were significantly counter to those predicted by the hypothesis.

#### 4. SOCIOECONOMIC STATUS

Siegelman (1965) observes a general ambiguity (along with Hoffman and Lippitt, 1960), in the relationships reported between socioeconomic levels in males and perceptions of parents. In his own study (1965), he found higher SES male college students to perceive parents as less loving, but refers to the Harvard study and Bayley and Schaefer (1960) paper as finding that subjects from higher socioeconomic levels had more loving fathers and mothers. These discrepant findings may well be due to age differences in subjects used in the dif-





TABLE XVI - A SUMMARY TABLE INDICATING SUPPORT AND REVERALS OF PREDICTIONS IN THE HYPOTHESIS FOR THE HIGH SCHOOL AND COLLEGE GROUPS

Group and whether Support or Reverse to Hypothesis	Love-Reject Factor BP or M or F only PCR Category	Perc. Task	Casual-Demand Factor BP or M or F only PCR Category	Perc. Task	Overt-Concern Factor BP or M or F only PCR Category	Perc. Task
SUPPORT HIGH SCHOOL BOYS	(BP) Lov* Neg*	R/F	(BP) S-L Pun* D-O Pun*	CFLx	(BP) D-O Rew*; (F) S-L Rew*	C/Sp CFLx Didx
Reverse	(F) Rej <sup>T</sup> (F) Lov <sup>T</sup> ; Neg <sup>T</sup>	C/Fg CFLx	(M) Cas*; (F) Cas*; Dem* (F) S-L Pun*; T D-O Pun*; Cas (F) Dem*	R/F C/Fg Didx	(M) D-O Rew <sup>T</sup>	R/F C/Fg R/F
SUPPORT HIGH SCHOOL	(M) Lov <sup>T</sup> ; D-O Pun <sup>T</sup>	C/Sp	(M) D-O Pun <sup>T</sup>	C/Sp	(BP) Pro*; S-L Rew*; (M) D-O Rew <sup>T</sup>	C/Fg
Reverse	(F) Neg <sup>T</sup>	CFLx	(M) Dem <sup>T</sup>	CFLx		
SUPPORT COLLEGE BOYS	(M) Lov*; Rej*; Neg <sup>T</sup> ; Neg <sup>T</sup> ; Rej <sup>T</sup> (F) Lov <sup>T</sup> (M) Lov <sup>T</sup> (M) Lov*; Rej*; Neg <sup>T</sup> ; Neg <sup>T</sup> (F) Neg*; Lov <sup>T</sup>	C/Sp CFLx CFLx Didx	(M) D-O Pun <sup>T</sup>	C/Sp	(support when O-Factor defined as loving concern) (BP) S-L Rew*; D-O Rew* (M) Lov*; Pro <sup>T</sup> (F) Lov <sup>T</sup> ; Pro* (M) Lov*; (F) D-O Rew <sup>T</sup> (M) Lov <sup>T</sup> (F) Lov*; S-L Rew*; Pro* (F) S-L Rew <sup>T</sup>	Didx C/Sp CFLx R/F
Reverse	-		(BP) Cas <sup>T</sup> (F) Cas <sup>T</sup>	Didx R/F	-	
SUPPORT COLLEGE GIRLS	-		(M) Dem <sup>T</sup> ; S-L Pun <sup>T</sup> (F) S-L Pun <sup>T</sup> (F) D-O Pun <sup>T</sup>	CFLx C/Sp Didx	(F) Cas* (this loads on O-Factor for college girls and - on L-R Factor) (F) D-O Rew <sup>T</sup>	C/Sp CFLx
Reverse	(BP) Lov*; Neg <sup>T</sup> (M) S-L Rew* (M) Lov*; S-L Rew* Rej*; Neg* (M) Lov*; S-L Rew* Neg* (F) Lov*; Neg <sup>T</sup> S-L Rew <sup>T</sup> ; Rej <sup>T</sup>	Didx R/F R/F C/Sp C/Fg				

Note: (BP) - refers to similar findings in perceptions of both parents. (M) - mother only; and (F) father only.

\* - indicates significant relationships and differences at .05 level or better.

T - indicates tendencies where the level of sig. < .10 but failing to reach .05 level.



ferent studies. In the present investigation, only boys and not girls, in the older college group showed a relationship between their PCR scores and SES. Higher SES was found to be associated with higher demand (which also shows a low negative loading on the Love-Reject Factor) in the mother. With the younger high school boys, higher SES was found to be associated with higher loving in the mother, and also with increased field independence and analytical perceptions on the perceptual differentiation measures. With high school girls the picture was different, in that lower SES was associated with a higher level of analytical perception (Closure Flexibility). However, the high school girls group had a slightly higher but not significantly so SES rating than the boys. Again, there is a suggestion that as the girls become more like boys in a possibly important experiential variable, they tend to function similarly on a perceptual task. It is also to be noted in the high school girls, that lower SES is associated with perceiving a "loving" kind of protectiveness (S-L Reward) in mother, and more rejecting, more demanding and greater punitiveness in father. The study of the relationship of SES to perception of parents or to perceptual differentiation was not, however, the focus of the present investigation. The focus, rather, was on perceived behavior of parents as related to the criterion variables of differentiation. The possibility suggested in the high school groups, that SES may influence subjects' perceptions of parents, (the latter in turn being associated with more basic perceptual functioning), seems to





have justified the inclusion of this variable in the study. This suggestion raises further questions for research similar to those studied by Hess and Shipman (1965). These researchers report findings of SES being related to cognitive development of the child.

## 5. DISCUSSION

Several questions are raised by the relationships which significantly ran counter in direction to the hypothesis. Two such reversals are noted: (1) for high school boys who functioned at a higher level of differentiation on the rod-and-frame measure to see both parents as lower on the Casual-Demand Factor, and higher on the punishment scales of this factor for PCR-Father on the changing figure task. A tendency was also noted for the same pattern to occur in the college boys on the rod-and-frame, and for high school girls on the Closure Flexibility tasks; (2) for the higher differentiating college girls to perceive their parents as lower or higher on these scales respectively loading positively and negatively on the Love-Reject Factor, in respects to all differentiation measures. Tendencies for the high school boys and girls in a similar direction for PCR-Father were observed on the Closure Flexibility task, and in regards to the boys also on the changing figure task.

In respect to the high school boys, it would appear that seeing parents as high in casualness and low in demand and punishment becomes associated with a more limited rather than a higher level of perceptual differentiation on some per-



ceptual tasks, but not others. (Lower punitiveness in both parents was found to be associated with higher analytical perception.) Without the qualification that components of perceptual differentiation are differentially influenced by the boys' perceptions of parents, the findings are contradictory. It is also to be noted that the findings of lower punitiveness being associated with higher performance on the embedded figure task (Cl/Flex) is counter to Seder's finding that field-independent (based on embedded figures test) male children were more often punished by their fathers. (Dyk & Witkin, 1965, p. 47). (Seder's information of parent-child interaction however was obtained via a different means. Her information came from a questionnaire completed by the mothers of children used in her study.) This would, however, seem to be the case on the rod-and-frame measure for the high school boys. Dyk and Witkin (1965) point out that it is necessary to identify more specifically the characteristics of mothers and of mother-child interaction that influence, positively or adversely, children's progress toward differentiation. They suggest the value of studying the separate components of this interaction. The present writer suggests the value of also studying the separate components of perceptual differentiation, as related to the specific characteristics of parent-child behavior.

In regards to the reverse picture presented by the high school boys in the present study as respects the C-D Factor, the explanation might be offered that high casualness





and low demand is seen by these boys as neglect. Neither the intercorrelations nor the factor picture support this explanation. The only suggested explanation, (and a somewhat tenuous one) from the factor picture is that the casual scale shows a low loading (.34 PCR-Mother and .32 PCR-Father) on the O-Factor, interpreted for the high school boys as protectiveness.

The discrepancy with the hypothesized relationships on the L-R Factor in the college girls group is somewhat difficult to account for, but does indicate that the girls' perceptions of parents relate to measures of perceptual differentiation somewhat differently than boys in a similar age group. In view of this observation, it was decided to compare the perceptions the college boys and girls had reported in their PCR, in two ways. In one comparison both of the total groups were compared, and in the other a group of college boys matched on the Differentiation Index were compared (see Appendix C, Table I). When the unequated groups were contrasted, no differences were found in the perceptions of mother, although boys tended to see her as slightly more demanding than did the girls. On the Father-form, boys in contrast to the girls reported him as more punitive on both of the S-L loving and D-O punishing scales, and also tended to see father as more demanding and slightly more rejecting than did the girls. When college boys were equated to college girls on the Differentiation Index, differences in perception of mother appeared at an acceptable level of significance. Boys in the equated group reported mother as more D-O punitive, and tended to see her as less casual and more demanding. They continued also to



see father as more punitive and more demanding. Tendencies are also noted for the boys to report father as more rejecting and less casual.

A problem in interpretation of the equated groups is presented by virtue of the fact that the matching was done on the index and not its individual components. A check on which perceptual measures were equated by using the index indicated that the groups were not adequately matched on the rod-and-frame and closure speed measure. The greatest mismatch was found to be on the rod-and-frame measure, with boys showing the greater field independence. The results of the comparison then, would favor the interpretation that the relatively field independent boys in contrast to relatively field dependent girls (since the mean of the equated groups did not show any great departure from those found in their respective total groups) perceive mother and father lower on the Casual-Demand Factor. (Considering the Sig. differences only.) It is noted that a tendency for more field-independent boys to see parents as less casual and more demanding also turned up as a tendency in the main analyses.

Comparisons of perceptions of cross-sex parent in the college groups were also done as a matter of supplementary interest in the question of sex differences, although not directly related to the problem under study (see Appendix C, Table II). In this comparison, college boys reported mother as more S-L rewarding, (loads on O-Factor for college boys), less demanding and less neglecting than father. They also





tend to see mother as more protecting and less rejecting. The college girls report mother as more S-L punishing (loads negatively on L-R Factor) and less neglecting than father. In addition, the college girls tend to see mother as less demanding and more loving. All of these differences, with the exception of those reported as tendencies, were found to be significant at between the .01 and .05 levels. The focus on cross-sex differences in perception of parents as related to more basic perceptual behavior, however, is not the direct concern of the present study. This being the case, no serious attempt is made to relate these sex differences or similarities to the perceptual differentiation variables. The findings are reported for the benefit of those who are interested in this area, or who wish to pursue this area of research further. Similarities as well as discrepancies to the findings of Droppleman and Schaefer (1963) with younger subjects are noted.

In relation to the contrasting picture presented on the L-R Factor for college girls in their reverse to predicted relationships, a tentative possibility for further research study is suggested. It is noted that when the boys from both high school and college groups were compared to girls, on the average they saw their parents less positively than did the girls (more neglecting, more punitive, more demanding.) However, the findings in relation to perceptual measures suggest that, as the boys group became more positive in their perceptions of parents, they show an increased capacity on several of the perceptual tasks. On the other



hand, the college girls group was found on the average to have more positive perceptions of parents, which possibly reflects increased dependency of the girls on their parents in contrast to boys. Consequently, in the case of the college girls, as they became less positive in their perceptions of parents (i.e. more like boys) they show an increase in their capacity on the perceptual tasks. In other words, the suggested relationship is that as girls approach boys, or vice-versa (or both boys and girls reach some optional level), in the ways they perceive parents, then the directions of the relationships to perceptual capacities will not differ. (This seems to be the case on the L-R Factor scales, but doubtful on the C-D punishment scales.) This explanation is posed as the basis for a hypothesis for further research in this area. Plausibility for such a hypothesis is suggested in part by Bieri (1960) who found that women who identified with fathers tended to be more field independent than women who identified with mothers.

In the initial chapters of the present report, the author made reference to studies in which perception of parents, as well as more basic perceptual behavior was found related to personality expression. Relationships are reported, from several studies, between perception of parents and personality variables (Cooper, 1959, 1960; Schaefer, 1965; Medinns, 1965; Siegelman, 1965). Also relationships are suggested between more basic perceptual behavior and personality expression (Frenkel-Brunswick, 1949; Klein, 1951; Leeper &





Madison, 1959; Coleman, 1960; Combs & Snygg, 1960; Dyk & Witkin, 1965; Witkin, 1965.) One might expect similar relationships to occur in the subjects used in the present investigation. If such relationships could be found, considerable support might be provided to the basic rationale of the present investigation as discussed in chapters one and two. In the present study, data on a personality measure, the Personal Orientation Inventory (Shostrom, 1965) was available for the high school groups. (Boys N=31; Girls N=43). Each of the twelve scales comprising this inventory was correlated with the perceptual measures used in the study, as well as each of the PCR scores for the Mother and Father-form. It was also felt that results from this analysis, although not the focus of the study, might suggest additional hypotheses for future research.

The POI is an instrument devised as a comprehensive measure of values and behavior seen to be of importance in the development of self-actualization (Shostrom, Manual, 1966). Since the findings from the present writer's analysis of the POI data are in essence, sufficient material for another complete study, only a brief reference shall be made to these at the present time. This shall be done without any serious attempt to integrate the findings into those already reported. The writer moreover, will not report correlation coefficients at this time, except in the appendix (see Appendix D, Tables I to III.) All relationships reported, however, were found to be significant most often at the .01 level, and none are less



than at a .05 level.

In the high school boys group, (see Appendix D, Table I), all PCR Factors were found to be related to at least one and in most cases, several of the POI scales. Perceptions of mother and of father as high on the Love-Reject Factor scale (low neglect) were found to be associated with what Shostrom refers to as a constructive view of the nature of man. High on the Casual-Demand Factor scales (high casual or low demand) on the PCR Mother-form was found related to high inner directiveness (reactivity basically toward self), high feeling reactivity (responsive sensitivity to one's own needs and feelings), high acceptance of aggression (ability to accept one's natural aggressiveness as opposed to defensiveness, denial, and repression of aggression), high spontaneity, and low capacity for intimate contact in relationships with others unencumbered by expectations and obligations (in other words, somewhat independent of the reactions of others.) Low on the punishment scale for the C-D Factor was found to be associated with higher time competence (present-oriented.) Indicative of the father playing a significantly different role in the personality development of the high school boys, were the findings on the Casual-Demand Factor PCR-Father scales. Being high on this factor was found to be associated with low self-actualization value (offering a primary value of self-actualizing people), low self-regard, low time-competence, high existentiality (ability to situationally react without rigid adherence to principles), and higher capacity





for intimate contact. In this connection it may be recalled that low casualness in father tended also to be related to a higher level of differentiation on several of the perceptual measures. The only significant relationship found on the O-Factor was on the protect scale. High protectiveness in the father was found to be associated with low capacity for intimate contact.

Several relationships of PCR Factor scales to the POI scales were also found to reach an acceptable level of significance in the high school girls group. (See Appendix D, Table II). Also there is a suggestion that mother in contrast to father, differentially influences personality formation in the high school girls, these influences also being different for girls in contrast to boys. In the high school girls group scores on the PCR Mother-form yielded significant relationships between the L-R Factor scales and the POI scales as follows: High reject and punitiveness were found to be associated with higher self-actualization value; high reject with higher synergy (ability to transcend dichotomies); and high neglect with a less constructive view of the nature of man. The PCR-Father scales loading on the L-R Factor yielded the following relationships: Higher reject and neglect and lower on the loving scales was found to be associated with higher feeling reactivity; low on loving scale with higher capacity for intimate contact. On the C-D Factor for the Mother-form, high casualness was found to be associated with low self-actualizing value; and higher D-O punishment, with higher spon-



taneity. Correlations of the father scales for the same factor, revealed higher casualness to be related to a greater degree of time-competence, and inner-directiveness, a greater degree of self-acceptance and of ability to accept one's natural aggressiveness. Lower protectiveness (O-Factor) on the mother scales was found to be related to greater time-competence, but on the D-O reward scale to higher self-actualizing value and a higher degree of spontaneity. Lower scores on the O-Factor PCR-Father protect scale were also found related to greater time-competence. When the scales were Symbolic-Love and Direct-Object Reward, the O-Factor was found to be associated with higher self-actualizing value and a lower capacity for intimate contact. Higher on the D-O Reward for the Father-form was found also to be associated with a more constructive view of the nature of man. The relationships as indicated above suggest some fruitful areas for further research, where perceptions of parents are used as a means of assessing parent-child interaction. The plausibility that perceptions of parents can be related to certain aspects of personality expression is apparent in view of the PCR-POI Correlations that have emerged in the findings reported above.

An investigation was also made of the high school groups to see if the perceptual measures turned up any relationships with the POI scales. (See Appendix D, Table III.) Several relationships were found significant. In high school boys, high performance on the Closure Speed (structuring task) was found related to low self-regard (defined by Shostrom as





affirmation of self because of worth or strength,) and with high acceptance of aggression. In the group of high school girls, high flexibility on the changing figure task was found negatively related to spontaneity. Higher performance on the structuring task (C/Sp) was found to be associated with a higher self-actualizing value, a more constructive view of the nature of man, and higher synergy (ability to transcend dichotomies.) A more constructive view of the nature of man was also found to be positively related to analytical perception (CFlx.)

The question of cognitive behavior being related to personality expression has been suggested by several authors. (Witkin, - in Scheerer, 1964; Bernstein, 1961, 64; Hess and Shipman, 1965.) Data on cognitive functioning was available in the high school groups, as assessed by their performances on the Watson-Glaser Critical Thinking Appraisal (1964.) PCR-scales were correlated with these measures, and relationships turned up to indicate that perceptions of parents could be related to cognitive behavior, although these were perhaps not in the expected direction. (See Appendix D, Table III.) In high school boys, significant positive coefficients of correlation were found between performance on the Watson-Glaser and PCR-protectiveness and rejection in mother. The same relationship and direction was found on the reject and neglect scales for PCR-Father. One may raise the question as to whether such negative perception of parents forces the child into a position of analyzing his world and developing a more criti-



cally analytical type of cognitive functioning. It is also to be noted that in contrast to girls, boys (who also as a group perform at higher levels on analytical perceptual tasks and are more field independent than girls) were found to perceive their parents as being more negative. In view of this, it is of interest to observe that critical thinking on the Watson-Glaser in the girls group, was found to positively relate to higher loving and lower neglect in mother. In the girls group, higher performance on the Watson-Glaser was also found to be associated with greater POI scale time-competence and inner-directiveness. Specific research focus in regards to the above reported relationships should prove fruitful.

A further possible research focus emerges from clinical observations made by the writer. In view of the small population of the college from which the college groups were chosen, it was possible to observe a number of subjects in their day-to-day interaction with others and their personality manifestations. These observations, (some of which were also made on the basis of counseling interviews with some of the subjects) suggested that those tending to fall at the extremes on their rod-and-frame measure appeared to have a somewhat different orientation to their world and to others. That is, they appeared to differ in comparison with the non-extreme subjects. It was clinically observed (and this is in the nature of a clinical hunch) that the highly field-independent subjects tended to manifest more difficulty in withholding aggressive remarks, and to show vocational interests of a less subjective or more impersonal nature. (i.e. physics,





math, biology, chemistry.) Some were also more inclined to withdraw from the college (actually several of these subjects were lost in the study because of this) when finding their programs discrepant with their real interests. On the other hand, the more field-dependent subjects in the college group seldom made contact with the college counseling service, and tended to be more interested in the more non-scientific fields. Also, when discussing discrepancies between their interests and their present programs, seldom did they withdraw from the college. It was also observed that in some cases, the more, but not extremely field-dependent subjects, tended to show a greater "ego-involved" manifest sensitivity to self and others. In view of the tendencies for girls to be attributed a greater degree of social skills and sensitivity in interpersonal relating (Anastasi, 1958), as well as on the average to be more field dependent than boys, some rather interesting speculations are raised. This becomes of greater interest when observing (again a clinical hunch) that as boys approach girls in average degree of field dependence, they tend to also manifest a greater degree of interpersonal or social sensitivity. These observations suggest that there might well be some optimal level of field dependence which is associated with some optimal level of interpersonal functioning. How the latter might be defined, however, presents somewhat of a problem. Nevertheless, some guides to such definition might be provided by a number of sources (Sullivan, 1953; Foote and Cottrell, 1955; Jahoda, 1958; Jourard, 1958; Lippitt and Gold,



1959; Gardner and Thompson, 1959; Schutz, 1960; Hinkle, 1959; Rogers, 1961; Jourard, 1963, 64; Bennis, et al, 1964.) The question of perceptual behavior being related to vocational interests and choice as well as to interpersonal orientation and functioning is one raised for more definitive research in the future. The question of perception of parents being also related to these variables is also an intriguing one.

## 6. CONCLUSIONS:

Although several of the possible relationships predicted from the hypothesis were not confirmed, there is sufficient evidence to accept, in part, the tenability of the hypothesized directions for several parent-child interaction categories as respects boys. A plausible conclusion would be that in the groups employed in the investigation, specific components of perception of parents do show significant relationships to certain components of perceptual differentiation, and that the direction of these relationships do indeed differ for college girls on scales loading on the Love-Reject Factor. All groups were found to support the hypothesis on several or at least one of the differentiation measures on one or more of the O-Factor scales. In view of the scale factor loadings on this factor for college boys, it was interpreted as more realistically supporting the hypothesis in respects to a Love-Reject Factor. Both the high school and college boys supported the hypothesis on Love-Reject Factor scales for one or several of the differentiation measures. This was clearly the case for college boys. The college girls group was found to clearly yield reverse to hypothesized re-





relationships on the L-R Factor scales for several of the perceptual differentiation measures. In regards to the PCR scales loading on the Casual-Demand Factor, only the high school boys yielded statistically significant relationships between their perceptions of parents and a differentiation measure. Their scores on the punishment scales supported the hypothesis on the analytical task (Closure Flexibility). However, reverse to hypothesized relationships were obtained between the casual and demand scales, and field independence (rod-and-frame) and ability to change set on the ambiguous figure task.

The wisdom and value of specifying and studying specific components of parent-child interaction as perceived by offspring, in relation to specific components of basic perceptual behavior is indicated. Further study of sex differences in these respects and for differing developmental levels would appear to be a profitable area of study. Several lines of inquiry have been suggested respecting this problem. It has also been suggested that inquiry respecting perception of parents as related to personality variables and cognitive behavior, might indeed also prove fruitful. A necessity for further research in these areas is apparent when one realizes the limitations common to cross-sectional studies. In this regard, the observations of Dyk and Witkin, although dealing with different ways of assessing parent-child interaction, may be heeded as applicable to the present study, (Dyk and Witkin, 1965, p. 47).



The connections we have been able to establish permit us to say no more than that certain characteristics of children tend to occur in association with particular patterns of mother-child relations and with particular characteristics of mothers. The whole issue of cause-effect relations remains open. The results obtained may as well be construed to favor the view that the mothers we studied have made their children the way we found them; or that the mother's behavior, as we observed it, is itself an adjustment to the kind of child she brought back from the hospital with her; or that the interaction observed is a product of the behavior of each participant in relation to the other, and the interaction served as a continuous modifier of the behavior of each in the course of their lives together.

Also as stated by Dyk and Witkin (1965), cross-sectional studies throw little light on the processes operating during development which have the observed connections as their end products.

As suggested at the outset, only longitudinal studies which begin with independent observations of infant and mother, and follow their interrelations continuously after they come together, can elucidate issues of process. We also suggested, however, that cross-sectional studies have the virtue of helping prepare for longitudinal studies by suggesting specific hypotheses to be tested. Without such hypotheses the inordinately long and difficult labor involved in longitudinal studies can easily go to waste.

As suggested by Rosen (1967) many kinds of experiences shape the child's perceptions of his parents, other than the implied parent-child interaction categories referred to in this present study. The developing child in our society is exposed to many sources of information and socialization influences other than his parents which plausibly provide frames of reference within which the parents' behavior is evaluated. As again noted by Rosen (1967), what the parent actually does





may in some cases be less important as far as the child's perception is concerned than the extra-familial influences which provide interpretations of parental behavior. Nevertheless, in the present investigation, and even though the correlation coefficients are not overly high, the findings that perceptions of parents can be found to be significantly related to perceptual differentiation measures, to cognitive behavior and personality measures are congruent with other researcher's reports, as was indicated in a previous chapter. What seems highly of research and practical value is to more specifically pin down the actual influences and processes (including and in addition to parental influences) by which the individual's perceptions are determined. In this way, as suggested several years ago by Blake, Ramsey and Moran (1951), a critical problem might receive elucidation which will provide new insights into the determinants of complex behavior. Also as previously stated by Murphy (1947), if we understand the differences in perceiving, we shall go far in understanding the differences in the resulting behavior. The findings in the present study suggest a variety of hypotheses for future research, hopefully leading one closer to this goal.

Several hypotheses for further research which arise out of the above discussion may be stated in a general way as follows:

- 1) Boys and girls who are equated in the way they perceive their parents show no differences in measures of perceptual



differentiation. One is suggesting here that Witkin's sex differences in field independence and other such perceptual measures are related to the differences in the ways boys, as versus girls, perceive their parents. Also, if the perceptions of parents are related to the type of parent-child interaction one might assume that reaching common perception of parents might presuppose a similar parent-child interaction. One might then expect similarities and differences in perception of parents to be related to the sex differences and similarities in measures of perceptual differentiation.

2) Perception of parents is related to observed characteristics of parent-child interaction. This hypothesis suggests the need to more adequately validate perception of parent measures. How such a hypothesis might be tested presents a challenge. Observations of samples of parent-child interaction similar to those used by Hess and Shipman (1965) might be useful in a study to test this hypothesis using either a cross-sectional or longitudinal approach.

3) Socioeconomic level is related to measures of perceptual differentiation in that offspring of "working class" parents show a lower level of differentiation on such measures. One might suggest that "working class" parents, being more authoritarian and oriented in their day to day occupations to accepting external controls from bosses and supervisors, receive reinforcement to perceptually accept stimulus situations as given. Such parents might also be expected to define the parent-child relationship as one where the child complies with parental demands





--and control on an immediate basis. On the other hand, in the case of middle-class parents, greater emphasis is placed on developing self-control in the child and the accepted value is for the child to learn greater independence of external control. In such a setting the child might be expected to develop increased capacity to analyze and restructure his world and thus be less influenced by external control. Such a child would be expected to show greater field independence as well as a higher level of differentiation on other perceptual measures. The latter is suggested in view of the findings by Hess and Shipman (1965).

4) Perception of parents is related to the cognitive variable of "critical thinking". This hypothesis is suggested for more extensive studies by the supplementary findings in the present investigation of PCR and Watson-Glaser correlations. Sex differences might also be further investigated in this area.

5) Perception of parents is related to self-actualization as this variable is defined by Shostrom's and Maslow's terminology. This hypothesis is also suggested by the supplementary PCR-POI correlations referred to in the present chapter and reported in the Appendix. A more intensive study of such relationships is suggested for different age groups.

6) Perception of parents is related to vocational interest and choice with sex differences in such perceptions related to the differential occupational interests and choices of males versus females.

7) Field independence and other components of perceptual



differentiation are related to vocational interests and occupational choices.

8) Field independence and other components of perceptual differentiation are related to school and college dropouts. Although socioeconomic level would have to be controlled in investigating this hypothesis, it is expected that field independence would show a positive relationship to school and college dropouts in middle-class families.

9) There is an optimal level of field independence (neither extremely field-dependent nor field-independent) and other components of perceptual differentiation which is related to some optimal levels of interpersonal competence and personality adjustment.





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## A P P E N D I C E S





APPENDIX A<sup>1</sup>

## FACE SHEET PCR QUESTIONNAIRE - MOTHERS

Roe-Siegelman

In this folder are a number of statements which describe different ways that mothers act toward their children. Reach each statement carefully and think how well it describes how your mother acted while you were growing up. Think especially about the time before you were 12.

Before each statement there are four lines. These are labelled VERY TRUE; TENDED to be TRUE; TENDED to be UNTRUE; VERY UNTRUE. Put an X on the line that indicates how true you think each statement was of your mother. If none of these descriptions seems quite right, you may put the X between two of the lines.

For example, if your memory is that your mother always objected if you were late for meals, you would mark the item as follows:

VERY	TENDED	TENDED	VERY
TRUE	to be	to be	UNTRUE
	TRUE	UNTRUE	

My mother

X

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1. objected when I was late  
for meals

Number \_\_\_\_\_

Date \_\_\_\_\_



APPENDIX A<sup>2</sup>  
FACE SHEET  
PCR QUESTIONNAIRE -- FATHERS

Roe-Siegelman

Below are a number of statements which describe different ways that fathers act toward their children. Read each statement carefully and think how well it describes your father while you were growing up. Think especially about the time before you were 12.

Before each statement there are four lines labelled VERY TRUE; TENDED TO be TRUE; TENDED to be UNTRUE; VERY UNTRUE. Put an X on the line that indicates how true you think each statement was of your father. If none of these descriptions seems quite right, you may put the X between two of the lines.

For example, if your memory is that your father often let you off easy when you did something wrong, you would mark the item as follows:

VERY	TENDED	TENDED	VERY
TRUE	to be	to be	UNTRUE
	TRUE	UNTRUE	

My father

_____	_____	_____	<u>  X  </u>	1. never let me off easy when I did something wrong.
-------	-------	-------	--------------	--

Number \_\_\_\_\_

Date \_\_\_\_\_







146

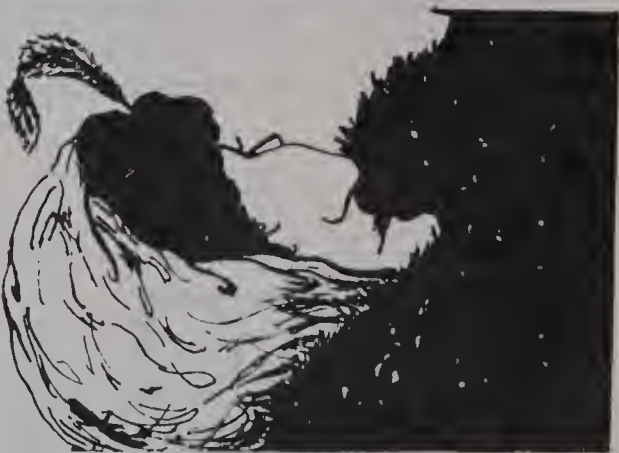
4



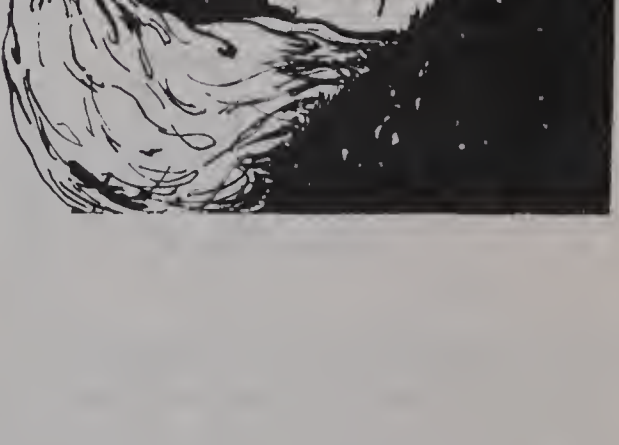
3



2



5



6



(From Loeper and Madison,  
Gleitman.)

1959, p. 146)\*

\* The present author is grateful to Appleton-Century-Crofts for granting permission to reproduce this series for use in the study. In actual use, each figure was separately affixed to a 3" x 2" bristol board "card" base.





## CLOSURE FLEXIBILITY

## (Concealed Figures)

## (Form A)

Name \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_ Date \_\_\_\_\_

Occupation \_\_\_\_\_

Developed by: L.L. Thurstone, Ph.D. and T.E. Jeffrey, Ph.D. • The Psychometric Laboratory • The University of North Carolina

**Directions:**

The row of designs below is a sample item of this test. The parts have been labeled to make description easier. These labels do not appear in the test items. The left hand design in each row is the figure. You are to decide whether or not the figure is concealed in each of the four drawings to the right. Put a checkmark (✓) in the parentheses under a drawing, if it contains the figure. Put a zero (0) in the parentheses under a drawing, if it does not contain the figure. Look at the row of designs below.

Figure



1



(0)

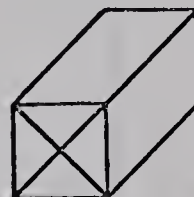
2



(0)

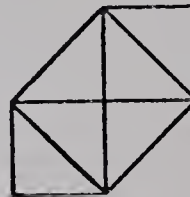
Drawings

3



(✓)

4



(✓)

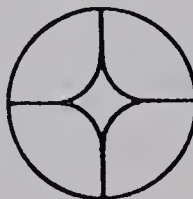
In the row above a zero (0) has been written in the parentheses under drawing 1. The first drawing is a square but it is larger than the figure. A zero (0) has been written under drawing 2. Although the second drawing contains a square of exactly the same size as the figure, it has been turned. Check marks (✓) have been written under the third and fourth drawings since they each contain a square of exactly the same size as the figure and have not been turned. It does not matter that the figure contained in drawings three and four is on a different level from the figure at the left.

**Sample:**

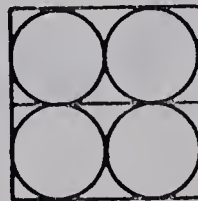
Here is another example for practice. Try it.



( )



( )



( )



( )

You should have placed check marks (✓) in the parentheses under the first and third drawings and zeros (0) in the parentheses under the second and fourth drawings.

WHEN YOU GET THE SIGNAL TO BEGIN, turn the page and mark more problems of the same kind. Work as fast and as accurately as you can, but do not guess. Wrong answers will count against you. You are not expected to finish in the time allowed. You will have exactly ten minutes to do as much as you can.

TMNF-119  
9-6-5000





## FACE SHEET OF CLOSURE SPEED TEST

# CLOSURE SPEED

## (Gestalt Completion)

Name \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_ Date \_\_\_\_\_

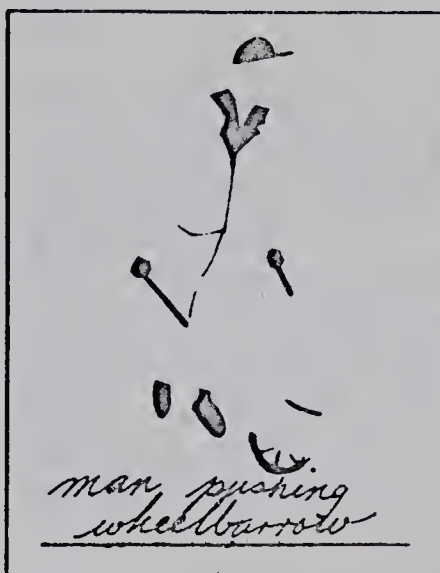
Occupation \_\_\_\_\_

d by: L.L. Thurstone, Ph.D. and T.E. Jeffrey, Ph.D.

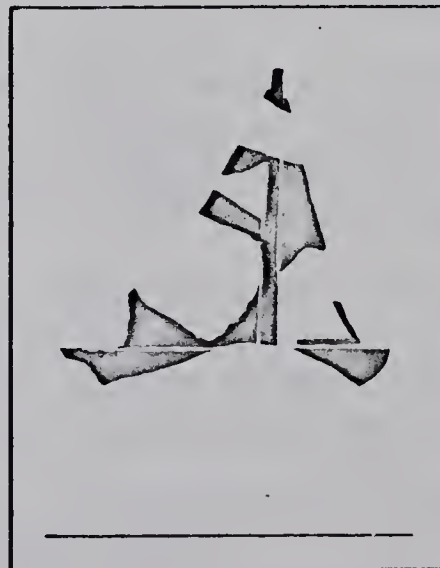
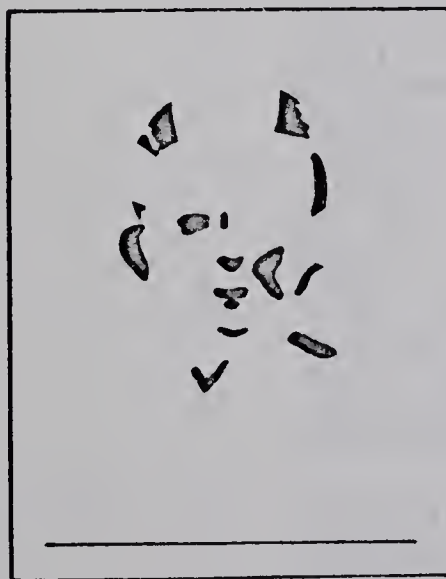
The Psychometric Laboratory The University of North Carolina

### Directions

Below is an incomplete picture of a man pushing a wheelbarrow. A description of what the picture represents has been written on the black line under it.



Below are some more pictures for you to identify. Write your answers on the lines.



WHEN YOU GET THE SIGNAL TO BEGIN, open your booklet and identify more pictures of the same kind. Work as fast as you can until you are told to stop. If some pictures are too difficult, skip them, and return to them later if you have time. You may need more than one word to identify the picture fully. You will have three minutes to do as much as you can.

STOP HERE. WAIT FOR FURTHER INSTRUCTIONS.



APPENDIX A<sup>6</sup>SOCIOECONOMIC RATINGS BASED ON OCCUPATIONS: LEVELS AND KINDS  
TABLE VII (McGuire and White, 1955)

- Rating of 1: a. Professionals (Lawyer, judge, physician, engineer, professor, school supt. et al.)  
 b. Proprietors (Large businesses valued at \$100,000 or more depending on community).  
 c. Businessmen (Top executives, president, et al of corporations, banks, pub. utilities.)  
 d. White Collar (CPA: editor of newspaper, magazine; executive secretary of status organization.)  
 e. Farm people (Gentleman farmer or land owners who do not supervise directly their property.)
- Rating of 2: a. Professionals (High school teacher, librarians and others with 4-year degree.)  
 b. Proprietors (Business valued at \$50,000 to \$100,000.)  
 c. Businessmen (Asst. office and dept. manager, or supervisors; some mfg. agents.  
 d. White collar (accountant; insurance, real estate, stock salesmen; editorial writers.)  
 e. Farm people (Land operators who supervise properties and have an active urban life.)
- Rating of 3: a. Professionals (Grade school teacher, registered nurse, minister without 4-yr degree.)  
 b. Proprietors (Business or equity valued from \$10,000 to \$50,000.)  
 c. Businessmen (Managers of small branches or buyers and salesmen of known merchandise.)  
 d. White Collar (Bank clerks, auto salesmen, postal clerks, RR or tel. agent or supervisor.)  
 e. Blue Collar (Small contractor who works or supervises his jobs.)  
 f. Farm people (Farm owners with "hired help"; operators of leased property who supervise.)
- Rating of 4: a. Proprietors (Business or equity valued from \$5,000 to \$10,000.)  
 b. Business and White Collar (Stenographer, bookkeeper; ticket agent, sales people in department stores, et al.)  
 c. Blue Collar (Foreman; master carpenter, electrician, et al; RR engineer.)  
 d. Service (Police Capt; tailor; RR conductor; Watchmaker.)  
 e. Farm people (Small landowner; operators of rented property hiring "hands".)





- Rating of 5:
- a. Proprietors (Business or equity valued from \$2,000 to \$5,000.)
  - b. Business and White Collar (Dime store clerks, grocery clerks; telephone and beauty operators, et al.)
  - c. Blue Collar (Apprentice to skilled trades repairmen; medium skilled workers.)
  - d. Service (Policemen; barbers; prac. nurse; brakemen.)
  - e. Farm people (Tenants on good farms; foreman, owners of farms who "hire out".)

- Rating of 6:
- a. Proprietor to Blue Collar (Business or equity valued at less than \$2,000.) Semi-skilled factory and production workers; assistants to skilled trade; warehousemen, watchmen.)
  - b. Service (Taxi and truck drivers, waiter, waitress, gas station attendant.)
  - c. Farm people (Sharecroppers; established farm laborers; subs'ce farmers.)

- Rating of 7:
- a. "Reputed lawbreakers"
  - b. Blue collar (Heavy labor; odd-job men; mine or mill hands, unskilled workers.)
  - c. Service (domestic help, busboy, scrubwomen, janitor help.)
  - d. Farm workers (Migrant workers; "squatters or nesters".)



APPENDIX B - TABLE I  
 ROTATED FACTOR LOADINGS, COMMUNALITIES AND PERCENTAGE OF VARIANCE FOR EACH  
 GROUP IN PRESENT STUDY FOR PCR-MOTHER

		Factor Loadings for PCR Scales - Mother Form										% of Variance	
PCR Factors and Communalities for Separate Groups		Pro- tect- ing	Sym- Love Pun.	Re- ject- ing	Cas- ual	Sym- Love Rew.	De- mand- ing	Dir- Obj. Pun.	Lov- ing	Neg- lec- ting	Dir- Obj. Rew.	% Com. Var.	% Total Var.
High School Boys (N = 32)	LR CD $O_2$ $h^2$	-.87	-.42	-.63	-.09	+.22	-.21	-.04	+.45	-.71	-.21	30	22
		-.02	-.78	-.47	+.76	+.04	-.80	-.87	+.20	-.13	-.23	39	29
		+.11	+.01	-.22	+.34	+.87	+.06	+.24	+.74	-.26	+.85	31	23
		.77	.79	.66	.70	.80	.69	.82	.78	.59	.82	-	74
High School Girls (N = 46)	LR CD $O_2$ $h^2$	-.28	-.62	-.84	+.10	+.27	-.55	-.53	+.80	-.81	+.17	41	32
		-.15	-.38	-.35	+.94	-.06	-.59	-.60	+.31	+.03	-.07	26	20
		+.68	+.47	-.03	-.02	+.89	+.32	+.33	+.37	-.12	+.86	33	26
		.56	.75	.83	.90	.86	.75	.76	.87	.68	.77	-	78
College Boys (N = 38)	LR CD $O_2$ $h^2$	-.03	-.69	-.97	-.30	-.04	-.29	-.39	+.46	-.89	-.30	40	29
		-.07	-.31	-.05	+.86	-.10	-.73	-.65	+.27	+.08	-.21	26	19
		+.73	+.27	-.03	+.18	+.79	+.41	+.23	+.60	+.03	+.80	34	25
		.54	.65	.94	.86	.63	.79	.62	.65	.81	.78	-	73
College Girls (N = 31)	LR CD $O_2$ $h^2$	-.20	-.72	-.91	-.08	+.44	-.52	-.29	+.91	-.93	+.14	50	36
		+.09	-.39	-.18	+.84	-.41	-.62	-.79	+.11	+.11	-.11	29	21
		+.73	+.11	+.01	+.32	+.39	+.16	+.24	+.08	+.05	+.77	21	15
		.57	.68	.86	.82	.51	.67	.76	.85	.87	.63	-	72





APPENDIX B - TABLE II

ROTATED FACTOR LOADINGS, COMMUNALITIES AND PERCENTAGE OF VARIANCE FOR EACH GROUP IN PRESENT STUDY FOR PCR-FATHER

Factor Loadings for PCR Scales - FATHER Form													% of Variance
		Pro- tect- ing	Sym- Love Pun.	Re- ject- ing	Cas- ual	Sym- Love Rew.	De- mand- ing	Dir.- Obj. Pun.	Lov- ing	Neg- lect- ing	Dir.- Obj. Rew.	% Com. Var.	% Total Var.
PCR Factors and Communalities for Separate Groups	LR	+ .12	- .20	- .84	- .26	+ .37	- .17	+ .08	+ .73	- .90	+ .24	32	24
	CD	- .12	- .68	- .30	+ .74	- .20	- .74	- .81	- .07	- .17	- .04	32	24
	O <sub>2</sub>	+ .66	+ .47	- .21	+ .29	+ .86	+ .17	+ .23	+ .59	- .21	+ .79	36	26
	h	.46	.72	.84	.69	.91	.61	.72	.88	.88	.68		74
High School Boys (N = 32)	LR	+ .09	- .51	- .83	- .25	+ .43	- .26	- .26	+ .82	- .93	+ .13	36	29
	CD	+ .08	- .67	- .42	+ .86	- .20	- .88	- .79	+ .27	+ .01	+ .05	36	29
	O <sub>2</sub>	+ .75	+ .11	- .16	+ .32	+ .79	+ .03	+ .08	+ .38	- .23	+ .85	28	23
	h	.58	.72	.89	.91	.86	.84	.69	.89	.92	.74		81
College Boys (N = 38)	LR	- .04	- .63	- .91	- .18	+ .39	- .14	- .33	+ .58	- .92	- .13	35	27
	CD	- .11	- .47	- .19	+ .88	+ .01	- .85	- .70	+ .13	+ .19	- .04	30	23
	O <sub>2</sub>	+ .80	+ .22	- .06	+ .12	+ .80	- .01	+ .31	+ .67	- .20	+ .86	35	27
	h	.65	.67	.87	.81	.79	.75	.70	.79	.92	.76		77
College Girls N = 31)	LR	+ .30	- .28	- .90	- .56	+ .77	- .05	+ .15	+ .82	- .94	+ .49	49	37
	CD	+ .04	- .77	- .33	+ .34	- .24	- .63	- .82	+ .08	- .06	- .22	27	20
	O <sub>2</sub>	+ .74	+ .19	- .08	+ .62	+ .35	- .27	+ .06	+ .31	- .07	+ .71	24	18
	h	.64	.71	.92	.81	.77	.47	.70	.78	.89	.79		75



APPENDIX C - TABLE I - COMPARISON OF MEANS ON PCR SCALES OF HIGH SCHOOL AND COLLEGE BOYS VS. GIRLS GROUPS WHEN NOT EQUATED, AND WHEN MATCHED ON THE DIFFERENTIATION INDEX

PCR SCALES	HIGH SCHOOL GROUPS						COLLEGE GROUPS					
	Total Group			Eq. on Dif. Idx.			Total Group			Eq. on Dif. Idx.		
	N=32	N=46	(N)	N=20	N=20	(N)	N=38	N=31	N=21	N=21	(N)	Idx.
Perceptions of:	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
MOTHER	$\bar{X}$	$\bar{X}$	t	$\bar{X}$	$\bar{X}$	t	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	t	t
Protecting	38.0	41.0	1.89 <sup>T</sup>	41.2	41.2	1.57	40.5	39.3	41.7	39.6	.61	.64
Sym.-Love Punish.	27.9	25.9	1.51	26.8	26.8	1.35	25.2	24.9	25.8	25.3	.24	.33
Rejecting	28.1	25.3	1.52	24.8	24.8	1.42	27.1	25.5	26.5	25.5	.78	.38 <sup>T</sup>
Casual	43.0	43.4	.19	43.1	43.1	.43	43.2	43.5	40.3	44.7	.14	1.71
Sym.-Love Reward	35.0	34.5	.47	35.2	35.2	.31	33.3	32.1	34.3	31.0	1.13	1.25 <sup>T</sup>
Demanding	44.7	42.2	1.17	42.5	42.5	.60	42.9	40.4	44.7	41.0	1.35	1.78 <sup>T</sup>
Dir.-Obj. Punish.	24.8	23.7	.63	24.3	24.3	.30 <sup>T</sup>	23.6	21.8	26.2	21.0	1.09	2.87**
Loving	57.9	61.0	1.52	62.3	62.3	1.90 <sup>T</sup>	59.6	58.1	60.8	57.5	.73	1.39
Neglecting	25.3	22.3	2.45*	21.7	21.7	2.48*	23.6	24.5	23.7	25.3	.55	.66
Dir.-Obj. Rew.	26.0	28.0	1.05	29.2	29.2	1.21	25.5	27.4	25.7	27.1	1.17	.67
FATHER	$\bar{X}$	$\bar{X}$	t	$\bar{X}$	$\bar{X}$	t	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	t	t
Protecting	39.3	41.1	.96 <sup>T</sup>	40.9	40.9	1.06	38.4	38.1	40.2	38.6	.14	.61
Sym.-Love Pun.	25.9	23.2	1.76	25.8	25.8	.11	24.7	20.9	26.7	20.2	2.89**	4.13**
Rejecting	30.3	27.0	1.48	27.8	27.8	.81	29.3	26.5	29.4	25.5	1.58	1.95 <sup>T</sup>
Casual	41.7	44.4	1.23	44.1	44.1	1.09	42.7	43.5	39.6	44.0	.38	1.74
Sym.-Love Rew.	32.3	32.0	.18	32.7	32.7	.37	31.1	32.0	32.1	32.6	.55 <sup>T</sup>	.20
Demanding	47.3	44.4	1.23	45.6	45.6	.05	45.9	42.8	48.2	44.0	1.74*	2.11*
Dir.-Obj. Pun.	25.9	22.2	2.09*	24.3	24.3	.68	24.8	20.9	27.1	20.2	2.32*	3.44*
Loving	53.8	57.6	1.45 <sup>T</sup>	56.8	56.8	.94	53.9	54.2	54.7	54.9	.12	.07
Neglecting	29.7	26.1	1.84	26.6	26.6	.80	28.2	29.1	27.4	29.0	.51	.73
Dir.-Obj. Rew.	26.0	27.9	1.01	28.3	28.3	.83	25.3	25.7	26.4	24.4	.23	.89
SES	3.7	3.2	1.63	3.7	3.5	.67	3.9	4.0	3.8	4.2	.54	1.48

Note: SES-The lower the number, the higher the rating of socioeconomic status.

\*-sig. at  $\bar{Z}$  .05 level; \*\*-sig. at  $\bar{Z}$  .01 level; T-sig.  $\bar{Z}$  .10 but  $\bar{Z}$  .05 levels; (two-tail tests) (N)-Although equated on DIdx, this did not result in a match on the rod-and-frame for the high school groups. (Sig. diff.  $\bar{Z}$  .04 level, with boys more field independent); or in a match on C/Sp (Sig. Diff.  $\bar{Z}$  .15, with girls superior). The college groups were better matched on all measures by the DIdx, but not sufficiently so on rod-and-frame (Sig. Diff.  $\bar{Z}$  .14 level, with boys more field independent.)





# APPENDIX C - TABLE II

## COMPARISON OF PCR CATEGORY MEANS IN PERCEPTIONS OF MOTHER VS. FATHER BY HIGH SCHOOL AND COLLEGE GROUPS

PCR Categories	High School Groups (N = 32)				College Groups (N = 38)			
	Boys		Girls		Boys		Girls	
	Mother	Father	t		Mother	Father	t	
Protecting Symbolic-Love Punishment	38.0	39.3	1.13		41.0	41.1	.09	
	27.9	25.9	2.36*		25.9	23.2	2.64*	
Rejecting	28.1	30.3	2.54*		25.3	27.0	1.06	
Casual Symbolic-Love Rewarding	43.0	41.7	1.01		43.4	44.4	.68	
	35.0	32.3	2.60*		34.5	32.0	2.64*	
Demanding Direct-Object Punishment	44.7	47.3	1.73 <sup>T</sup>		42.2	44.4	1.36	
	24.8	25.9	1.62		23.7	22.2	1.39	
Loving	57.9	53.8	2.84**		61.0	57.6	1.98 <sup>T</sup>	
Neglecting Direct-Object Rewarding	25.3	29.7	3.22**		22.3	26.1	3.13**	
	26.0	26.0	.07		28.0	27.9	.02	

Note: \* - sig. at .05 level; \*\* - sig. at .01 level

T - sig. at .10 level and indicating a tendency to differ.

(Two-tail tests used in testing sig. of diff. between two means of correlated samples).



APPENDIX D - TABLE I  
CORRELATION OF PCR SCALES AGAINST PERSONAL ORIENTATION INVENTORY SCALES IN A HIGH SCHOOL BOYS GROUP

PCR SCALES AND RELATED FACTOR	PERSONAL ORIENTATION INVENTORY SCALES (N = 31)											
	Time Com- pet- ence	Inner Di- rec- ted	Self Actu- aliz- ing Value	Exis- tent- ial- ity	Feel- ing React- ivity	Spon- tan- ci- ty	Self Re- gard	Self Accep- tance	Na- ture of Man	Syn- er- gy	Accep- tance of Ag- gres- sion	Capa- city for Intim. Contact
Perceptions of: MOTHER	r	r	r	r	r	r	r	r	r	r	r	r
Protecting	.04	-.13	-.08	-.10	-.15	-.22	-.15	-.13	-.13	-.11	-.03	-.16
Sym.-Love Pun.	-.30	-.35	-.13	-.19	-.18	-.24	-.21	.03	-.03	.03	-.09	-.30
Rejecting	-.21	-.21	-.06	-.06	-.04	-.20	-.08	-.19	-.11	-.16	-.04	-.21
Casual	-.07	.39*	-.01	.19	.36*	.10	.08	.14	.09	-.06	.39*	.24
Sym.-Love Rew.	-.24	.16	.10	-.07	.35	.05	.11	.12	-.01	.07	.10	.04
Demanding	-.33	-.48**	-.06	-.27	-.35	-.50**	-.11	-.20	.09	.11	-.01	-.54**
Dir.-Obj. Pun.	-.39*	-.19	-.02	-.11	-.11	-.14	-.01	-.03	.21	.27	-.16	-.12
Loving	-.10	.25	.05	-.07	.14	.20	.06	.13	.06	.10	-.13	.17
Neglecting	-.20	-.27	-.08	-.10	.06	-.22	-.09	-.05	-.43*	-.07	-.01	-.04
Dir.-Obj. Rew.	-.24	.09	.12	-.13	-.14	.14	.11	.08	.23	.06	-.04	-.02
FATHER	r	r	r	r	r	r	r	r	r	r	r	r
Protecting	-.06	-.03	.30	-.30	-.28	.11	.30	-.11	.18	-.27	-.18	-.35*
Sym.-Love Pun.	-.49**	-.03	.17	-.23	.02	-.02	.08	-.10	.11	.14	-.01	-.16
Rejecting	-.18	-.09	-.10	.01	.08	-.11	-.21	-.09	-.22	.01	.16	.02
Casual	-.07	-.06	-.42*	.04	.06	-.07	-.50**	.24	.12	-.31	.17	.16
Sym.-Love Rew.	-.33	.04	.22	-.28	-.08	.01	.27	-.12	.30	-.07	-.18	-.20
Demanding	-.26	-.04	.47**	-.41*	-.02	-.13	.24	-.11	.03	.20	.19	-.43*
Dir.-Obj. Pun.	-.32	.05	.20	-.20	-.05	.07	.17	.05	.31	.17	.01	-.15
Loving	-.08	.09	.19	-.16	-.17	.13	.23	.03	.25	.06	-.33	-.07
Neglecting	-.12	-.19	-.27	-.01	.21	-.19	-.26	-.06	-.36*	-.22	.26	-.04
Dir.-Obj. Rew.	-.25	.21	.26	-.13	-.06	.06	.29	.02	.28	-.10	.02	-.05

Note: Decimal points omitted.

\* -  $p \leq .05$

\*\* -  $p \leq .01$





APPENDIX D - TABLE II  
CORRELATION OF PCR SCALES AGAINST PERSONAL ORIENTATION INVENTORY SCALES IN  
A HIGH SCHOOL GIRLS GROUP

PCR SCALES AND RELATED FACTORS	PERSONAL ORIENTATION INVENTORY SCALES (N = 43)											
	Time Com- pet- ence	Inner Di- rec- ted	Self Ac- tual- izing Value	Exis- ten- tial- ity	Feel- ing Reac- tivity	Spon- tan- eity	Self Re- gard	Self Accep- tance	Na- ture of Man	Syn- er- gy	Accep- tance of Ag- gres- sion	Capa- city for In- timate Contact
MOTHER	r	r	r	r	r	r	r	r	r	r	r	r
Protecting +0	-37*	-02	22	-16	01	03	03	-02	-14	00	07	02
Sym.-Love Pun. -LR	-07	13	41**	03	17	17	04	11	-04	24	23	06
Rejecting -LR	-09	19	32*	17	18	18	-06	09	-08	35*	20	07
Casual +CD	15	00	-29*	-01	17	00	-25	-05	-04	-18	12	16
Sym.-Love Rew. +0	-02	-08	23	-21	03	07	06	-09	09	03	-02	-24
Demanding -CD;LR-	-27	-04	28	-16	04	06	-02	-05	01	18	-03	-17
D-O Punish.-CD;LR-	-08	05	30*	05	20	30*	11	09	-18	06	12	00
Loving +LR	10	-03	-09	-10	00	-07	10	01	24	-13	00	-06
Neglecting -LR	-03	-03	12	-01	05	16	-10	-07	-34*	11	09	-01
D-O Rew. +0	-02	01	29*	-14	09	29*	19	-01	09	-14	06	-23
FATHER	r	r	r	r	r	r	r	r	r	r	r	r
Protecting +0	-33*	-16	12	-21	-21	-21	01	-06	14	05	-01	-24
Sym.-Love Pun-CD;LR-	-18	-06	27	-03	01	08	26	-10	-06	-04	-05	00
Rejecting -LR	-13	19	22	17	34*	23	05	-12	-24	15	17	26
Casual +CD	29*	30*	11	15	16	19	-07	29*	15	10	38*	08
Sym.-Love Rew. +0	-09	-06	36*	-23	-04	17	19	03	25	23	-05	-42**
Demanding -CD	-30*	-12	14	-09	06	-03	15	-16	-12	03	-11	-01
D-O Pun. -CD	-15	-08	15	-06	19	22	16	-12	-20	-05	-05	03
Loving +LR	02	-18	-04	-27	-31*	-08	-05	15	20	-07	-11	-37*
Neglecting -LR	10	25	13	25	32*	22	-01	04	-25	04	27	28
D-O Reward +0	03	04	36*	-12	05	24	17	07	30*	04	10	-30*

Note: Decimal points omitted  
\* - p ≤ .05  
\*\* - p ≤ .01



APPENDIX D - TABLE I II- CORRELATIONS OF PERCEPTUAL DIFFERENTIATION MEASURES, AND A COGNITIVE MEASURE AGAINST PERSONAL ORIENTATION INVENTORY AND PCR SCALES (11)

PERSONAL ORIENTATION INVENTORY SCALES	High School Boys Group (N = 31)					High School Girls Group (N = 43)				
	Perceptual Differentiation Measures					Perceptual Differentiation Measures				
	R/F	C/Fg	C/Sp	CFLx	Cognitive Wat-Glas.	R/F	C/Fg	C/Sp	CFLx	Cognitive Wat-Glas.
Time Competent	r	-04	-15	-16	r	05	24	20	r	22*
Inner Directed	-28	00	-04	05	-01	07	-07	21	15	30*
Self-Actualizing Val.	-15	-07	-24	04	-10	20	-24	34*	27	09
Existing Reactivity	-10	-22	-04	02	-07	01	17	00	03	27
Feeling Reactivity	-06	-10	-02	32	00	-10	-03	-10	03	03
Spontaneity	-20	05	-05	-12	-12	-23	-36*	03	16	-05
Self Regard	-27	-09	-37*	02	-10	09	-25	25	02	24
Self Acceptance	-16	-29	24	-04	-10	05	-03	10	-03	24
Nature of Man	00	12	-08	-13	22	04	04	35*	38*	25
Synergy	-02	-02	-24	-02	-08	04	-12	32*	16	12
Acceptance of Aggres.	-11	25	44*	28	11	01	05	17	04	-02
Cap. for Int. Cont.	-19	09	-16	-19	-12	-10	06	-13	-17	23
GIRLS										
BOYS					GIRLS					
Perceptions of Mother					Perceptions of Mother					
S-L	S-L	D-O	D-O	D-O	S-L	S-L	S-L	S-L	S-L	D-O
Pro Pun	Rej	Gas	Row	Dem	Pun	Rej	Gas	Row	Dem	Pun
49**	20	46**	-13	-07	19	03	-15	19	-22	-36**
Perceptions of Father					Perceptions of Father					
22	05	50*	05	-05	02	11	-33	38**	-05	-10

Note: Decimals have been omitted.  
 Coefficients for R/F and C/Fg have been reflected, so that +r indicates positive relationship in direction of a higher level of differentiation on these measures.  
 (N) - Correlations with Watson-Glaser only. See Tb. II, Ch. IV for "r"s for PCR and Differentiation measures. \* -  $p \leq .05$ ; \*\* -  $p \leq .01$







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